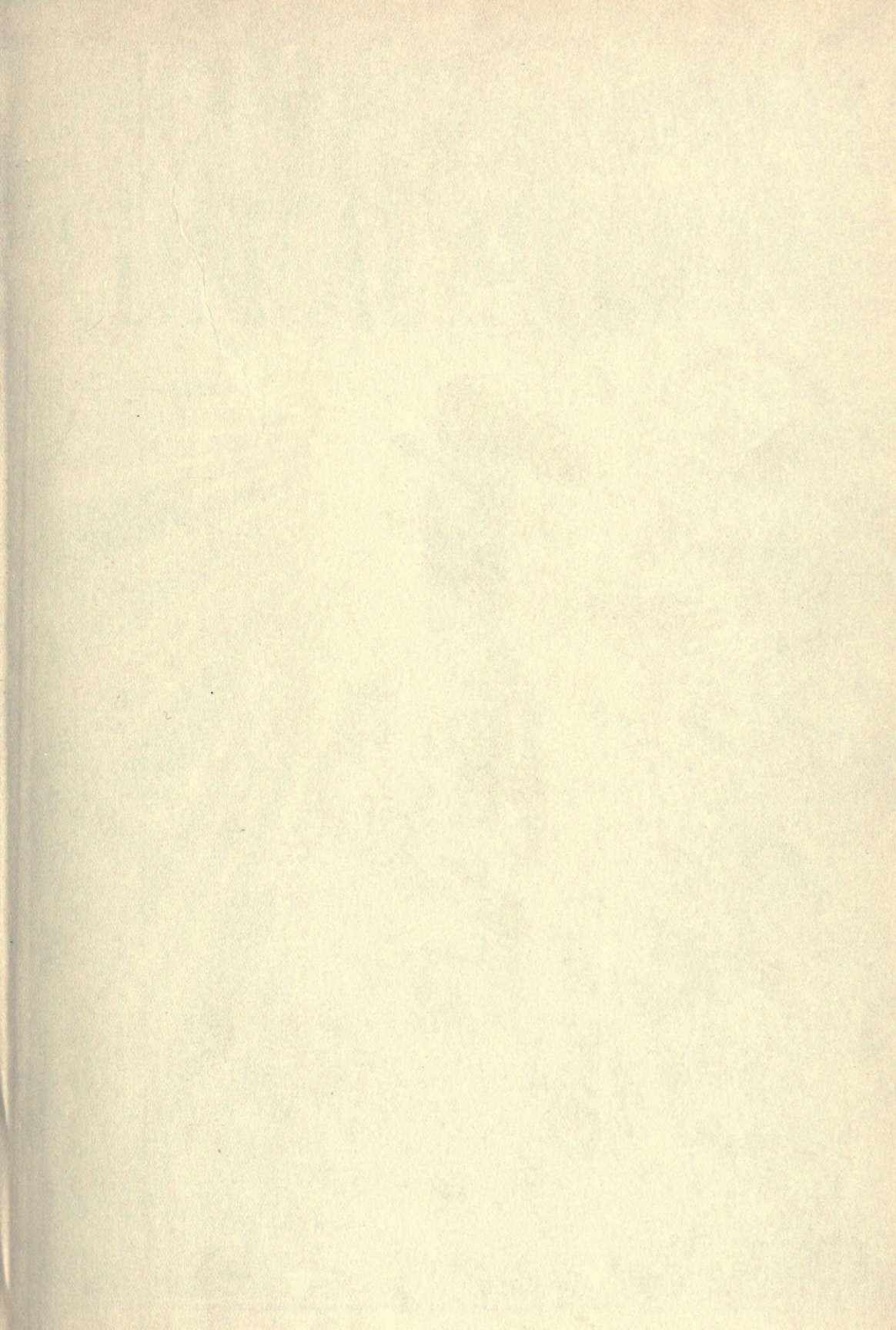


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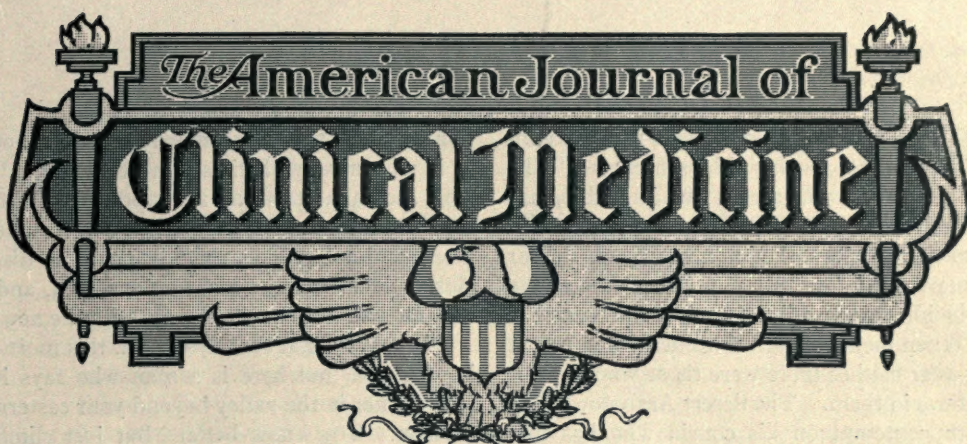
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Vol. 17

JANUARY, 1910

No. 1

THE OLD YEAR IS GONE. THE NEW YEAR IS COME

By GEORGE F. BUTLER, M. D.

THE months past have had their clouds and sunshine, their storms and calms. The riot and perfume and loveliness of summer have been in your soul, but storms have swept it, and black clouds blotted out the sun, and life was still and gray and desolate. Have you been querulous because of the stormy days? Remember,

"This life is but a mirror. Laugh, and smiles come back to greet us;
Scowl at fate, and just as surely frowning features ever meet us.
If it hurts, just grin and bear it. What's the use to cry and curse?
Make the best of circumstances; take what comes, it might be worse."

Beginning the New Year, you should be thankful for the storms that have racked and deluged your being, for they have served to make an abundant harvest. Rich may your sheaves be, not with tears, but with the wheat of love and sympathy, of wisdom and of charity, capable of feeding many hungry hearts, minds and souls with food that will comfort and satisfy.

And in your labors,
When some good work thou hast done,
Rest, and let the setting sun
Flush the cheek of welcome night;
Let the woodlands, far and near,
Breathe sweet music in thine ear!
Everything to thee seems bright;
Peace is come and wrong is gone,
Something good this day thou'st done!

Something noble thou hast said
To the poor, barefooted maid;
It was but a single word,
But she blushed, and through the tears
Laughed the sun as Love which cheers;
It was music, what she heard.
Joy is come to that poor maid
For the good word thou hast said.

In thy mind some noble thought
Worthless things has set at naught?
Aspirations, high and just,
Have o'ercome the trivial strife
Which makes man's material life?
The ideal is thy trust?
Rest in peace—thy work is caught
In an act, a word, a thought.

The Pullbacks

FLOATED in on my desk from circumambient space this pithy sentence:—"The people who are not up on a thing are usually down on it." Then came a report from a medical society wherein a worthy old doctor remarked that he had never used the active principles and did not believe in them.

When men—or rather women—first began to wear clothes there were those who did not believe in them. The desert Arab now looks with contempt on his cousin who has forsaken the tent and dwells within four walls. The man who left the chase for wild animals and herded domestic ones was a degenerate to his fellows; but he agreed with them in his contempt for those who sought to cultivate the soil. Europe described America as one enormous counter at which stood our fathers with goods to sell; but her princes marry the merchants' daughters. The southern planter termed the north a race of base mechanics, and lost for lack of mechanics.

Every advance step in the progress of the race from savagery has been deemed a degenerative one by the conservative who does not feel the impulse to move along. The history of medicine is one unbroken series of illustrations of this principle of human psychology. Why should we expect the present generation to be exceptional in this respect and to act as no previous generation ever did. We don't. This is not an exceptional age. Mankind alters the cut of garments, sartorial and mental. Man adopts new creeds, he acquires newly discovered facts by the bushel, he expands the limits of his knowledge and his powers in every direction, but at heart he is the same old man who lived in the days of Solomon, and ages before that wise king.

The first sentiment with which a physician, old enough and experienced enough to have settled views of his own, receives a radically different idea, is of repulsion. "I know what I know; and this thing does not harmonize with it. If true, I have been mistaken in some of my most cherished opinions, self-deluded in some of my personal observa-

tions. Since the new-fangled stuff does not fit in with my own beliefs it must be wrong." And the man starts as an opponent of the innovation and only yields if by good fortune his examination goes deep enough to disclose coincidences he had not expected, and new facts that reconcile the old with the new.

The sun rises at exactly 6 a. m. this morning for you, but here is a man who says it rises sooner in the valley beyond your eastern horizon. You know better—but just climb the mountain and see if you get a different view from its height.

You do not believe in the active principles and have never used them, but that fact weakens the force of your objection; so why not investigate and try them, and then you can triumphantly silence their advocates by speaking from their own standpoint. That's the way to settle them—try it.

You are too honest to yourself and too well imbued with veneration for your profession and a sense of duty to your patients to make the trial anything but a strictly fair and impartial one—you deal as honestly with the matter as you would with old solitaire. So you get some of the most generally applicable active principles—aconitine, veratrine, strychnine arsenate, hyoscyamine, gelseminine, cicutine hydrobromide, hyoscine, calx sulphurata, calx iodata, and a bottle of a saline laxative—and you by no means omit the descriptive matter that tells how to apply these potent agencies. You study the books, apply the remedies, and are ready to demolish—the man who does not believe in them.

FAKE OPERATIONS—HOW MANY ARE THERE?

There is one thing that every physician should retain out of the old scholastic system inherited from the temple priest-physicians of Hippocrates' day, and that is the ever-present obligation due to the great and noble profession that has admitted him to brotherhood. Every act of our professional lives reflects honor or dishonor upon the entire

profession. Every time any member of our guild is held up to the public gaze as doing a discreditable thing each and every one of us suffers a share of the obloquy, and the entire profession is lowered in the esteem of the public.

The result is that there are two duties incumbent upon us, assumed with our matriculation, and from which we may never escape: to do nothing that will dishonor our guild, and to defend the guild and its members against any accusation calculated to do it harm. The latter duty entails that of intervening if we see anyone of the brotherhood about to do a wrong act, especially toward a patient, who is entitled to the protection of our guild as a body. But in this latter event we do not need to proclaim our brother's delinquency by the mouth of the town-crier or to discredit the entire profession because of the acts of one unworthy member. To do this is to fulfil our duty neither to patient nor profession.

The public press recently reported, on the alleged authority of a prominent physician, that a surgeon had performed hundreds of fake operations for appendicitis, merely incising the skin and sewing it up, meanwhile curing the real malady by those drugs he never ceases to decry.

From our knowledge of the man quoted we simply *know* he never gave that interview as printed, or maligned the profession as a body. Reporters sometimes pay more attention to getting up a readable article than to its exact truthfulness.

The testimony quoted is the word of a disgruntled nurse; and this would not for a moment be admitted as conclusive evidence by any qualified jury. Even a doctor has the constitutional right to an impartial trial, and to the presumption of innocence until proved guilty. In any event, the honor and interest of every member demands that such cases should be considered by the profession itself, with professional privacy; for the simple fact of such an accusation is a disaster, and even if the verdict is for the defendant, a grievous injury will have been inflicted upon him by the charge. He is therefore entitled to the full benefit of profes-

sional secrecy in the matter; trial and penalty, if any, being matters for ourselves alone. The laws governing our guild are ample for handling such cases, and if any member has evidence of such disreputable practices it is his duty to lay it before the professional tribunals. If he has no such evidence he has no right to place his suspicions before the public.

Could the charge possibly be true? There are doubtless an unprincipled few in the ranks of our profession, as in the clergy and the law, in every grouping of men. The confidence that is imperatively demanded of the sick by their medical director gives opportunities to the scoundrel that have no parallel elsewhere. This throws into bold relief the virtues of the profession as a whole, since so very few of them yield to the temptations, born of need and matured on ingratitude, and take advantage of the trust imposed upon them. The profession as a whole is poor; the mass of doctors have to count their pennies and weigh carefully the outlay of their dollars, even in the means of increasing their ability to fulfil their professional duties. Were these "fake" rascalities general we should be rolling in wealth. Are we? Well!!!

The facts of the case are probably these: an angry, revengeful nurse, seeking to hurt the employer who had discharged her, comes to a doctor with her tale of fraud, of patients betrayed, and the swindler enjoying the proceeds of his rascality. This arouses in the hearer's mind that natural resentment of this unworthy colleague's acts; an incautious expression to a reporter of this indignant repugnance follows, and the matter, with a wealth of elaboration, is spread before the eye of a public, which, always desirous of a new sensation, drinks in the delectable tale with avidity. Results—the medical profession and every member are smirched, and Quackery rejoices; the public confidence in us is weakened and the faith-healer, *et id omne genus*, correspondingly strengthened.

If it is true? The great Teacher once said: "*Let him who is without sin among you cast the first stone;*" and not a man heaved a rock at the culprit who had been

found out. Let every doctor ask himself whether he has ever been so driven by need, by pressing wants and pestering debts, that the opportunity to do a harmless fake on a wealthy man who could spare the money assailed his conscience shrewdly; whether it required all his moral force to resist it; and whether he felt the possibility of yielding to the temptation. If he did yield, he will cast no stone; if he did not yield, he will thank God for having endowed him with a little more firmness or for having made the temptation a little less than with his erring brother. In neither case will he feel vindictive toward the latter, but rather impelled to veil his delinquency from the public gaze and privately to admonish him to "go and sin no more."

Another year! Another year!
 The unceasing rush of time sweeps on!
 Whelm'd in its surges, disappear
 Man's hopes and fears, forever gone!

Swift years! But teach me how to bear,
 To feel and act with strength and skill,
 To reason wisely, nobly dare,
 And speed your courses as ye will.

—A. Norton.

ATROPINE IN DIABETES

It seems that the more this remarkable alkaloid, atropine, is studied, the wider becomes its field and the more striking are found to be its remedial powers. Rudisch made some interesting observations upon its action in diabetes (*Medical Record*). He found that atropine reduced the quantity of sugar excreted and increased the toleration of carbohydrates. Glycosuria uniformly disappeared more rapidly when atropine was given with antidiabetic diet than when diet alone was relied upon. The long-persisting trace of sugar, irremovable by diet, soon disappeared under the influence of atropine. When glycosuria reappears under an increase in the carbohydrate ration, atropine clears this away without reducing the carbohydrate allowance.

The methyl bromide of atropine proved less toxic than the sulphate, but it is more

costly and slow in displaying its good effects. Of the former Rudisch began with doses of 1-8 grain three times a day, for adults, increased until 1-2 grain at each dose was given. In one case three grains a day were given for a short while, with no other toxic symptom than dryness of the throat. Of the sulphate he gave 1-150 grains three times daily, increasing to 1-20 grain. These huge doses were well tolerated. The alkaloid was not pushed beyond the production of dryness of the mouth. In no case was an idiosyncrasy against atropine detected or a habit formed.

THE ART OF MEDICINE

Surveying the field of drug-therapeutics, with the view to appreciating the causes that have led to the neglect of the materia medica, I come at every turn upon this state of affairs, namely, that most physicians employ compounds of several drugs as therapeutic entities, to be directed against disease as a whole and not as a group of distinct agents.

This view sinks the individual characteristics of the single ingredients, and constitutes of each newly composed mixture a new remedy, to be employed as a whole. Take as an instance the formula employed by Prof. Lambert in the treatment of drug-habits: tincture of belladonna, and the fluid extracts of hyoscyamus and of xanthoxylon. The same formula is used for every patient, without any variation except as to the size of the dose, and this is regulated solely by the induction of toxic atropine effects. Old or young, male or female, none of the factors that modify dosage are considered or allowed to alter the proportion of the three ingredients.

One effect of this method is to multiply enormously the number of "drugs," since every mixture that can be put together is a new remedy. The impossibility of any human brain appropriating the millionth part of these possible combinations, and their effects on any malady for which they may have been advised, throws the doctor upon the mercy of the "authorities," from whom he hopes to get really useful prescriptions. It gets him also into the habit of using a few

set formulas, and of giving trial to every new one that may be urged on him by astute advertising.

The other way of viewing the prescription is, that it is composed of such remedies as are indicated by a study of the patient and are fitted to his disordered functions. Each ingredient is intended to meet a distinctly appreciated need, and in dose is arranged with that end in view. If it happens that the various needs can be met by remedies given at the same intervals and the drugs are not chemically incompatible, they may be combined in one mixture; otherwise they are dispensed separately, with appropriate directions. Here, a new arrangement is advisable at every visit, as the needs vary; one drug may have exerted enough action, another not enough; one need has subsided, a new one arisen; and so the physician meets the varying symptom-complex with a similarly varying arrangements of remedies, as they are indicated.

The latter seems in every way the preferable method. It is exact, scientific, and its efficiency is such as to be beyond the belief of those not familiar with the scientific miracles it works. But it *looks* difficult; it *seems* to require an insight into the working of the human body in health and disease, and a knowledge of the ultimate powers and action of drugs that bewilder those unaccustomed to such work. Besides, the older view of the prescription is so confirmed that it has become inveterate, and men with difficulty wrench themselves loose from their accustomed habits of thought and action. Physicians who have warped their minds into this unnatural method find it as impossible to change as it is to compel a long retroflexed uterus to stay straight in its normal position.

The exasperating thing about the matter is that when one really makes the attempt to comprehend this natural method it is so "dead easy!" The study of physiologic function, the recognition of deviations from normal operation and fitting the appropriate remedies are so natural that the only sensation one has very soon is that of a great relief, as the burden he has unconsciously

borne rolls off his shoulders and he can straighten his back!

Not that the work in either direction is nearly completed. We do not yet know our own bodies thoroughly; we are not yet versed in all the manifestations of disease; we are still discovering unsuspected powers in the oldest and commonest of our drugs. But for the greater part of our work we all—and I mean here the vast body of practising physicians and not a few superlatively qualified beings—know quite enough to accomplish our tasks, to do our duty by our patients.

The principal physiologic functions are well known, and their ordinary disorders are readily recognized by the average practitioner. The dozen remedies most frequently required are familiar to us all, and with them most of our work can be done. The three primary indications are elimination, raising depressed function, and lowering excessive action; and how much is there in the art of medicine beyond these three? With these alone one may accomplish much. Proceeding from them as a sound base, one may push very far his developments, and the refinements of drug application made possible by such studies may require very many reagents; but through it all the basal triad of indications remains unaltered.

Your patient has no more right to all the truth you know than he has to all the medicine in your saddle bags.—
Oliver Wendell Holmes,

THE FIRST USE OF CALCIUM SULPHIDE IN DIPHTHERIA

Dr. Ussher's article on calcium sulphide, published in *CLINICAL MEDICINE* for November has aroused such interest in this medicament that we may expect at last for that potent remedy the attention it deserves. It may be of interest, therefore, to refer to the original report on it that inaugurated its employment in modern therapeutics. This was a paper by a French practitioner, Fontaine of Bar-sur-Aube, describing his use of the sulphide in diphtheria. This publication excited much comment, and many physicians

throughout Europe took up the treatment and reported success with it.

The difficulties in the way of the general use of this drug were the impossibility of securing a supply of full and unvarying strength, owing to the exceedingly difficult nature of the drug as to its pharmaceutical handling; and the dread of its supposed toxic qualities. Then came in antitoxin, and its remarkable powers so impressed us that a veritable fetish has developed, and it is not safe for anybody so much as to suggest that there can be any other remedy for diphtheria. This has even progressed so far as to sweep the profession completely away from the old *materia medica* in a chase for more antitoxins, and nothing else is listened to but serum-therapy. Nevertheless, the most bigoted worshippers of antitoxin acknowledge that its value diminishes with each day of the disease, and after five days it is of problematic applicability, even in the desperately huge doses now advocated. That dangers attend the application of these can scarcely be denied.

Altogether, it seems that the claims of calcium sulphide may now be heard; and if it succeeds in saving a few lives that are beyond the reach of antitoxin, the latter's advocates need not take this as a slur upon their deity.

Fontaine's modest report follows:

"Calx sulphurata," Fontaine writes, "has for five years formed the basis of my treatment of diphtheria. During this period I have been compelled to fight almost without relaxation against this scourge. The experience with many hundreds of cases has taught me that this agent is alone capable of arresting the process of decomposition resulting from the diphtheritic infection. The antifermentative quality inheres to this body, since part of it traverses the organism without decomposing, part breaking up into sulphydric acid, sulphites or hyposulphites. Calx sulphurata increases the mucous respiratory secretion, loosening false membranes; it acts as a diuretic and diaphoretic; exerts a general action of hyperactivity of the circulation, and augments the appetite.

"For these reasons I make it my dominant remedy in diphtheria. As variants I employ

copper sulphate when an emetic is indicated, aconitine for fever, quinine arsenate and hydroferrocyanide for nocturnal or diurnal accesses; later, for general prostration strychnine, quassin for anorexia, hyoscyamine for spasm of the larynx or stomach, and iron arsenate for anemia and leukocytosis."

We had a physician in our city whose smile was commonly reckoned as being worth five thousand dollars a year to him, in the days too of moderate incomes. You cannot put on such a smile as that any more than you can get sunshine without sun; there was a tranquil and kindly nature under it that irradiated the pleasant face it made one happier to meet on his daily rounds. But you can cultivate the disposition, and it will work its way through to the surface.—Oliver Wendell Holmes.

GONORRHEAL RHEUMATISM

I have had so many instances of the control exerted over gonorrheal infections by the sulphides of arsenic and lime that I want to hear of some failures. It is not well to have too great success. One doctor took a dislike to me because I said I had had no death from typhoid fever in twenty years; and he frankly acknowledged he did not believe that such a statement could possibly be true. But another physician present at once said that *he* had had no typhoid death in *thirty* years, and challenged contradiction. So that I fear the effect of asserting that I have had no failure to cure gonorrheal rheumatism in twelve years with these same sulphides, and earnestly ask my friends to contribute a few failures, to make the report less radical.

Benjamin Franklin said he failed to be convincing when he fondly asserted his views; so he formed the habit of saying that "he did not doubt the correctness of his opponents' views—but that it had sometimes seemed to him that possibly the contrary might be true in some cases, under some circumstances." That set the other man to thinking—without arousing his self-assertiveness.

Some doctors resent any suggestion that their practice can be bettered. They seem to feel it a duty to stand up for themselves, under all circumstances, and if you suggest

a remedy, they at once retort that it can not possibly be as good as their own.

This is directed, therefore, solely to those who have not as yet succeeded in curing gonorrheal rheumatism. Give a grain of calx sulphurata, full U. S. P. quality, and a milligram of arsenic sulphide, together, at 10 a. m., 4 p. m. and 10 p. m., adding a fourth dose in the morning, if it can be borne, at least an hour before breakfast. Keep this up until the skin smells of sulphide, and for two weeks more; and if the patient is not well then, write and tell me, please.

You can't plant a new crop in an old field till you clear away the stubble. The birth of an idea usually means the death of an ideal.—Herbert Kaufman.

YOU NEED BACKBONE

You know you do, Doctor. There isn't a day in your life that you do not need something to stiffen your spinal column to meet the vexations and disappointments of life—something that will help you to ignore the opposition of your enemies and the hectoring of your friends; an antidote against crosses in love and double-crosses in business. You may be proud of the peculiar rigidity of your backbone and of the quality of the "nerve" that it is supposed to house, but you know yourself that there are times when it softens like a tallow-dip under the warmth of flattery, or becomes frosted and frangible when the winter of adversity sets in.

Thus far no man has found a serum or devised a specific for weakness of the moral spine. Therefore we purpose to enter the field with a little magazine which will answer the same purpose better, we think, and be pleasanter and cheaper to take—the subscription price being only 50 cents a year. It will be called *The Backbone Monthly*. The first number will appear in January, and it will be the organ of the Backbone Club. You are hereby invited to become a charter member, which will entitle you to receive the magazine on the same terms as other people, will give you the privilege of buying all the books and

other publications that the Club may hereafter issue, and of helping boost the "Backbone" movement in your own community and everywhere else. Remember—all this for an annual subscription to *The Backbone Monthly* for 50 cents—three subscriptions for \$1.00; eighteen for \$5.00.

The Backbone Monthly will not be big, except as to quality. It will be of a size convenient for your pocket, every article will be short, and nothing will be admitted which hasn't snap, fire and vivifying purpose. We shall borrow when we want to and plagiarize when we please—providing the goods are up to the standard that we require.

It will be artistic if we can make it so, but "Roycroftie"—God forbid! Good to look at, good to read, and a true heart-warmer, but no vehicle for cranks or for the clever scoffing of fools over the works and the longing and the aspiration of earnest men honestly seeking to do good. It will strive to stiffen backbones, not dissect them out.

The Backbone Monthly will be of special value to doctors, for it will stand with them and behind them. But it is not for doctors only. It will cater to no special class. We hope to make it an inspiration to young and old, to men and women, to rich and poor, to scholar and sportsman. It will not aspire to be profound, or very wise or even very clever. But it will try to give every reader hope, optimism, joy in living, and an ambition to become stronger, better, wiser, more lovable, more efficient. It will be filled with prescriptions for the blues, which can be filled without recourse to the pharmacist,—in fact, you will find it an intellectual toddy and a moral high-ball without a bit of a headache or a single jag in the whole twelve numbers. Lots of stimulus will be found, but of a kind always to do good, never to do harm.

All for 50 cents a year!

Doctor, we want your subscription, we want it bad, and we want it now. Send us five dollars and prescribe it for a bunch of your "chronics." Best New Year's present you can make—also the best investment.

Address orders to The Backbone Publishing Company, Ravenswood Station, Chicago. Abbott, Clough, Burdick and Butler are responsible for *The Backbone Monthly*, and they are going to make it hum!

We want your help.

Today, please.

Now!

PREPARE FOR THE WINTER DISEASES

Now that the winter is upon us, there is a diminution in the number of deaths from diarrheal diseases, but we may expect a very large increase in the number of deaths from pneumonia, tuberculosis and other long diseases.

Whooping-cough certainly will be more prevalent, and it is well to remember that this affection is not the harmless disease it is sometimes thought to be. While it may not be followed by so large a proportion of death as some other diseases, it invariably leaves the victim in a worse physical condition and less able to fight off other diseases. Many parents have so little fear of whooping-cough, that they do not hesitate to expose other children to it. If there is suspicion that a child has whooping-cough, it should be isolated from other children, no matter what the inconvenience, until the danger has passed. That is according to the golden rule.

In case of whooping-cough, if it is at all severe, the patient should be kept in bed. The child needs an abundance of fresh air day and night, thorough ventilation, but should not be permitted to run around, which is bad for the patient and a danger to the other children. Saturation with calx sulphide, calx iodata for the bronchial symptoms; atropine, *enough*; careful attention to the alimentary toilet—these will do the rest.

Those who are subject to diseases of the air-passages should avoid too sudden changes of the weather, or at least should be prepared for such changes by additional wraps. The habit of taking a daily morning sponge-bath materially lessens the danger of taking cold.

The practice should be begun while the weather is mild and gradually it becomes possible to take a sponge-bath or a hand-bath in quite cold weather without chill. If the symptoms of a cold appear they should be recognized early and nipped in the bud by appropriate medication along active-principle lines. Such remedies as aconitine, atropine and calx iodata, with the associated "clean-out," are usually indicated.

Forth from the casement, on the plain
Where honour has the world to gain,
Pour forth and bravely do your part,
O knights of the unshielded heart!
Forth and forever forward!—out
From prudent turret and redoubt,
And in the melley charge amain,
To fall but to rise again!
Captive? ah, still, to honour bright,
A captive soldier of the right!
Or free and fighting, good with ill?
Unconquering but unconquered still!

—Robert Louis Stevenson.

IS CRIME A DISEASE, AND IS SOCIETY AT FAULT

Dr. Emory Lanphear has contributed to *The St. Louis Republic* a series of papers in which he presents his views on socialism, of which he is an advocate. The choice of the medium was questionable, as the papers were accompanied by a running comment of unfriendly criticism by one who did not believe in socialism, and while opposing Dr. Lanphear's views whenever an opportunity offered, withheld the need of approval when merited. This is not calculated to do the reader any good—if he is a socialist he is irritated by the one-sided conduct of the discussion; if not, he is prevented from getting some much-needed information.

It is not the part of this journal to discuss questions of religion, politics, or general science, except in so far as they touch on our chosen field, the art of medicine. But in one point this series does touch us, and that is when Dr. Lanphear discusses the relation of crime to pathology.

Strictly speaking, the term crime is applicable only to such transgressions as were,

punishable by death under the common law, these being murder, rape, robbery, arson, burglary and grand larceny. Sin is transgression of the laws of God as interpreted by each church to fit its own tenets. Vice is defined by Lanphear as "improper actions dependent upon inordinate indulgence of natural appetites which are in themselves innocent: intemperance, unchastity, duplicity, depravity, and possibly some dishonesty and lying." The socialist claims that with proper regulation of our social system the principal causes of vice and even of crime would disappear. "The criminal is such from heredity, environment, training, lack of education, passion, or laziness and love of display."

If the socialist system extinguished competition and rearranged society, so that every individual would have his needs met and the fear of want removed, much of the present incentive to crime would be removed. For examinations of very many criminals have shown that among these there is a vast preponderance of the degenerate, the weak, the diseased, the unfit; and that criminality and inability to compete with the honest and healthy are inseparable. There is no legitimate basis for self-gratulation for your uprightness, my friend; if you resisted temptations before which your neighbor fell, you did not feel the force of the temptation as he did, or you would have fallen too. This is the argument.

But heredity—Lanphear says—has even less to do with this than environment and example. Better these, and the evil influences of bad moral heredity may subside, as the physical debility of consumptive children has done. The imitative tendency, with hunger, cold, rags and illness, are far more potent incentives to crime than is a hereditary tendency. If these are done away with, and a wholesome system of training and education is skilfully adapted to each child's needs, the temptations removed and self-control learned, crime and sin should indeed become rare. Altogether the socialist draws an attractive picture of society as it should be, he asserts, were it reconstructed along his lines.

But would these benefits really follow? Somehow the practical application of theories has a habit of developing difficulties unforeseen and entailing consequences unexpected. When vaccination had proven its power, the early opposition was replaced by extravagant expectations of its influence in prolonging the average of human life. But it turned out that not all those saved from smallpox lived to three-score-and-ten; but the multitude of children spared by that disease afforded more material for the ravages of scarlet-fever and kindred pests, which became much more prevalent.

The vice of greed, the lust of power and of property, the desire for luxuries and the dislike for work, are innate in the human being; and however much we may alter our dress and our speech, our creeds and our institutions, however great the progress we may make in knowledge and arts, the human heart remains the same—and we have good authority for pronouncing it deceitful and desperately wicked.

The desire for preeminence is innate. Every human being craves to be distinguished from the great mass by some notable characteristic. Carlyle was amused by the woman who bragged because her teeth were harder to extract than those of anybody else in the village; as if that were a proof to her of superiority! Every woman wants to garb herself more becomingly than all the other women. The man who prayed that he might have a full harvest of corn "and all his neighbors little nubbins" still lives and hasn't changed his nature. Men will still crave the woman other men want, and having secured her, will in time tire of her and want some other woman; and so will women still fancy some particular man, and that more especially if the other women also want him—and she will tire of him and want a change—and all these things are not dependent upon law, or creed, or social system, but on human nature.

Are we then opposed to socialism or to the socialist program? Not a whit. Only through effort comes progress, only through actual trial is the true value of a proposition demonstrated. It is only the men of action

who make things move. When socialism succeeds in convincing a majority that some one of its proposals is wise it will be tried, and one success will pave the way for another.

Nevertheless, we are not ready to admit the primary tenets of the propaganda; that competition is essentially evil or responsible for the ills attributed to it; that individuality should be merged in an all-embracing governmental machine; that Sparta was better or more desirable than Athens, or gave the world a tithe as much; or that New Zealand has yet shown that life under her system is better than that where competitive conditions prevail and one *must* use his wits. If man can be emancipated from the struggle for existence he will be a unique exception in the field of animate nature, and the experiment has yet to be successfully made.

Labor is life; from the inmost heart of the Worker rises his god-given Force, the sacred celestial Life-essence breathed into him by Almighty God; from his inmost heart awakens him to all nobleness—to all knowledge, "self-knowledge" and much else, so soon as Work fitly begins. Knowledge? The Knowledge that holds good in working, cleave thou to that; for Nature herself accredits that, says Yea to that.—Thomas Carlyle.

HOW AND WHEN TO GIVE ARSENIC

Arsenic is a remedy that is often misused. It is frequently prescribed for various cutaneous affections, especially the dry scaly forms; yet when the body has been saturated with arsenic to a certain degree its presence is shown by just such an eruption, possibly with loss of hair and beard, and yellowish cutaneous discolorations due to the combination of the metal with albuminoid substances.

So also when arsenic is employed to combat palustral fevers; if the doses are too large it occasions a febrile movement that can only with difficulty be distinguished from that of the malarial disease, especially as it assumes the periodic type. Nevertheless arsenic here also is too valuable a medicament to be laid aside.

In neuralgias and other neuroses good results are obtained from strychnine arsenate.

In anginose and suffocative conditions this should be combined with hyoscyamine for the spasmodic element and with morphine for the pain. So taught Burggraeve, unaware as yet that the pain is so largely spasmodic that the morphine is unnecessary, hyoscyamine being capable alone of giving more relief, without the numerous disadvantages pertaining to morphine. The immense advantage of associating glonoin is also a development of American clinical observation.

For the fever of consumption Burggraeve employed caffeine arsenate to retard the organic combustion, and found many times that even in galloping phthisis the course was arrested, and improvement followed the lowering of temperature and slowing of pulse.

For apyretic or chronic maladies, we have iron arsenate for chloroanemias, sodium arsenate for scrofulosis, arsenic iodide for the strumous, sulphur iodide for herpetic affections, etc. The use of antimony arsenate for the insomnia of wealthy, lazy gluttons is one of those apt and delicate touches that make active-principle therapy so attractive. In treating gonorrheal infections the addition of a milligram of arsenic sulphide to each dose of calx sulphurata materially enhances the effect.

If there is any remedy that will cause arrest and retrogression of arteriosclerosis it is arsenic iodide. This is, of all preparations of either iodine or arsenic, the quickest to get to work, and probably the safest, as least likely to leave an arsenical deposit in the body. Besides, as both elements irritate the eyelids, we have in this a certain means of recognizing the full-dose action, when it is time to reduce or suspend the remedy.

Copper arsenite fills a place of its own in combating gastroduodenal mycoses and fermentation, allaying many forms of gastric irritability, such as that of alcoholics; also lienteric diarrheas, as well as the milder affections of the digestive tract in children.

In all cases arsenic should be administered in small and frequent doses, sustained until evidences of its action appear, then stopped

if the need has passed, or continued in moderated dosage if the malady is chronic.

The effect of arsenic in favoring fatty degeneration explains its value in acute febrile affections, where it acts powerfully in resolving the newly formed products of the disease. In malarias it is now believed that arsenic, joining itself to the red blood-corpuscles through its well-known affinity for hemoglobin, protects these bodies from the attacks of the plasmodia.

Arsenic is a *safe* remedy—toxic effects from it are not possible to the physician who is aware of its action and watches for the known evidences thereof.

ANTAGONISM OF DRUGS

Moeller states that treating a man for insomnia and night-sweats, he administered morphine and atropine simultaneously, and secured the action of each without interference by the other—inducing sleep by morphine and stopping the sweats by atropine. This harmonized with experimental observations of Knapsteen of Bonn.

What, then, becomes of the classic assertions concerning the antagonism of drugs? Every day we give together strychnine and hyoscyamine, and even in strangulated hernia secure bowel movements therewith. In gastralgia one generally secures the desired effect only by combining morphine, hyoscyamine and strychnine; and in seasickness the terrible cramps are calmed by the same combination. When Burggraave began to feel the approach of age he commenced taking every evening strychnine arsenate, aconitine and digitalin, thus equilibrating his physiologic accounts; correcting also a disposition to arthritism and gravel.

Very well. But this illustration does not in the least invalidate the principle of single-drug therapy; it does prove, however, that under certain conditions certain drugs may support each other—the prescriber selecting their dosage according to changing conditions.

A short time before his death Claude Bernard said to Burggraave: "Instead of compounding remedies which contain an in-

finity of most-dissimilar ingredients, and which pharmacy seems to have so bizarrely assorted that each patient might find there his special but unknown remedy, you employ pure principles, exactly dosed and having an action perfectly known. We know not only what is this action, but we have the power to decide on what anatomic elements it is exerted, thanks to experimental physiology, which even in opium has made known to us the existence of alkaloids with action diverse and even opposed. It is thus one practises scientific medicine."

But, people say, why not employ the medicaments "as nature gives them to us?" Using the same process of reasoning, why go to the trouble of extracting metals from their ores? Isn't it about as reasonable to coin our quartz into silver dollars or build bridges with the red dirt of the northern Wisconsin mines?

Some day the wise man will attach the physician to his family, not to cure diseases but to prevent them. As a business matter it will be more economic.

—James P. Warbasse.

THE WOODY FIBERS OF PLANTS: WHAT GOOD?

Why should you insist on your patients swallowing the woody fiber of plants when you know it does them no good?

Tannic acid interferes with the absorption of the really valuable principles in medicine; why should he insist on his patients swallowing the tannic acid?

Every useless element of a plant increases the bulk of the dose and renders it disagreeable to take and difficult to be retained by the stomach, while these substances render absorption slower and delay the real medicinal elements of the plant in getting to work. Why then should you insist on the patient taking these disagreeable elements of the remedial plant?

The coloring matter in medicines does not exert any desirable remedial action on the human body but only renders the dose less pleasant to take and especially prone to decomposition; so that the medicinal prepara-

tions containing these coloring matters deteriorate materially. They are therefore injurious as well as useless. Why not leave them out?

By excluding the woody fiber, the tannic acid, coloring matters and other inert principles, we finally have left of our plant-remedy a group of active principles: alkaloids, glucosides, etc. These principles are developed in the plant, not for *our* use but for its own; and under varying conditions of sun and shade, heat and cold, dryness and moisture, climate, seasons, etc., these specific principles are developed in varying quantity and proportion.

Each of these active principles exerts an action of its own upon the human body, differing in some respects from that of all the other active principles in the same plant. In so many cases there has been proved a direct antagonism between two or more active principles developed in the same plant, that we are constrained to ask whether there is not some such relation between them as there is between the toxins and antitoxins of diphtheria and other diseases?

This antagonism, and the different development of the active principles under varying conditions, are so marked that the preparation made from one lot of the plant at one time and another lot of a similar plant at another time may exert diametrically opposite powers. The actual effect exerted by the plant-remedy, that is, by the sum total of the group of active principles it contains, is represented in general by the stronger, plus, minus, or variously modified by, the others, according to the degree to which each of them may have been developed in the plant.

The usual way to find out exactly what the plant-remedy will do, is to try it on the patient, a method fraught with perils, condemning the physician to timid experiment at that period of the disease when alone he can hope to modify radically its course by direct, powerful, intelligent intervention.

For this reason we say, use the active principles, given in doses which will do exactly what we wish.

To enable us to do this intelligently, we must study our patient and recognize the pathologic conditions present; not at all or necessarily the name of the disease, since remedies do not act on the names of diseases but on pathogenic conditions, and we may find the same pathogenic condition running as a primary element through many diseases.

This compels us to study, especially and particularly, the great book of nature, the patient himself. This study, illuminated by the light of modern physiology and pathology, enables us to note with exactness the points at which we can apply remedies whose exact action is known to us, as we see certain indications for the need of exactly the effects we know these remedies will produce. Guess-work and uncertainty are eliminated, and our confidence in our drugs and in our own ability to apply them usefully, grows with every fresh illustration of their applicability.

The active principles are "medicines with the dirt left out."

A lady, endeavoring to describe to friends the active-principle method, said: "The alkaloidal doctor gives very little medicine, but what little he gives goes right to the right spot, and does exactly what he wants it to do."

There is many a nobleman dwells in a cot,

The palace holds many a clown;

And princes have beds out of tamarind bark,

While beggars have couches of down;

Brave kings are in cotton, base serfs are in silk,

While slaves like an emperor show,

For the only true test is the heart in the breast—

But the world doesn't look at it so.

—Charles Eugene Banks.

THAT NEW ANESTHETIC

A new medical marvel has recently appeared upon the horizon. For the last few weeks it seems impossible to pick up a single newspaper which fails to call attention to the merits of stovaine, which is being injected into the spinal canal to produce anesthesia. The wonders which can be accomplished with this preparation and the re-

markable results obtained by the operator, Dr. Jonnesco, are rapidly becoming a household tale.

As we all know there is nothing very new about stovaine, nothing new about spinal anesthesia. Nearly ten years ago, a French surgeon produced surgical anesthesia by the intradural injection of cocaine. Many patients were operated upon, some even here in Chicago, and there were some deaths. Then eucain was given in the same way, and its career as a spinal anesthetic was equally short. The next remedy to be so used was magnesium sulphate. Stovaine falls heir to this decade of experimentation. It acts in precisely the same way as the others. While it is a good remedy and exceedingly useful in its selected sphere, there is no evidence to show that it is any more of an "epoch-making" remedy in spinal anesthesia than the others already tried and found wanting. Indeed, that it was not harmless as a lumbar injection was pointed out some four or five years ago.

Understand, we do not wish to pose as "knockers;" our doubts apply to the mode, not to the remedy itself. The technical difficulties and the dangers of spinal anesthesia are so great that it is hardly likely that it will ever become generally popular with physicians. The only new features in Jonnesco's much advertised clinics seem to be the association with strychnine and the injection into higher levels of the spinal canal. How great advantages these innovations may present cannot, of course, be determined by the newspaper reports.

Stovaine has been before the profession for five years. It was discovered by a French chemist, in Berlin, in 1904. Chemically it is dimethylaminobenzoylpentanol. For local use or for infiltration anesthesia it is safer than cocaine; in fact, it is undoubtedly a very valuable preparation, seeming to have decided advantages over similar remedies of its class, in extracting teeth, for operations upon the mucous surfaces and for minor operations elsewhere. But to announce it as something entirely new, something wonderful, a medical marvel, is a grievous error—one which the medical profession will be

the first to recognize. Apparently the manufacturer's press agent has been busy, but this mode of presentation to the laity will, in the long run, do more harm than good.

Everything in Nature seems to have this sign on it, "Move On." Nothing stands still. Every atom in the universe is on the move. You must either move on or get run over.

THE COMPLEX ACTION OF DIGITALIS

I am asked by men who know how to use digitalin, what is the action of digitalis itself. This plant contains four active glucosides, of which digitonin sedates the heart and relaxes vascular tension, antagonizing the other three. One would be inclined to say that the action of digitalis is that of the stronger group, minus the weaker. But the question is much more complicated, owing to the different solubility of the four glucosides and the time each requires to get to work.

Take digitalis as administered in powder. Digitonin is quickest, getting to work in a few minutes and its effects lasting two to four hours; so that the first effect is a sedative-relaxant one. But within half an hour we get the digitalein action, antagonizing digitonin; the tonic action on the heart begins, and lasts three to six hours, according to the dose. In thirty hours we get the heart-tonic and vasoconstrictor action of digitalin, and in sixty hours both of these effects still more powerfully from digitoxin, which latter may be sustained for days, or as some claim, for weeks.

However, if we employ the infusion we get the effects of only digitonin and digitalein, which alone are soluble in water, while from the tincture we get the digitalin and digitoxin action, these being soluble only in alcohol.

It has been asserted that digitonin, being closely related to saponin, renders digitoxin soluble in water. But even if this were admitted it would not excuse the use of a variable mixture of antagonistic remedies, either of which may preponderate.

A curious misconception exists as to the diuretic action of digitalis. Since digitonin

and the three tonics are all diuretics it has been asserted that the crude drug is therefore preferable to any one of its glucosides. But digitonin is only diuretic when the vascular tension is so great as to prevent a sufficient supply of blood reaching the kidneys. The other glucosides are only diuretic when vascular tension is so relaxed and the heart-force so low that that organ is unable to pump enough blood to the kidneys. It evidently is impossible for both to act as diuretics at once; and as their action is directly antagonistic, each must as directly interfere with the other when really indicated.

Nor is the argument valid that digitonin allays the perilous vasoconstriction of digitoxin; for the former has done its work and been excreted two whole days before the latter begins its work.

Yet I do not doubt that people can be found who argue for meal made by grinding corn and cob together as they do for whole wheat; although the world at large prefers to eat the kernel and leave the bran and the straw for the animals.

Every honest conviction, held by anyone, contains a truth and a lesson for everyone. And the way to derive the good is to treat it with mingled courtesy and caution, wearing neither horns nor a tether.

THE TREATMENT OF THE TUBERCULOUS

Lawrence F. Flick, the medical head of the great institution endowed by Phipps to fight tuberculosis in Pennsylvania, is a man whose utterances on this topic are too important to be neglected. Flick has a right to an opinion, in virtue of his rarely equaled opportunities for observation, which he has embraced with an ardor not always manifested. His paper in the November number of *Merck's Archives* is of such merit that we advise readers to secure it, by writing to the publishers, Merck & Co., University Place, New York City. To illustrate our view of its value we supply some extracts:

Tuberculosis is probably always primarily a lymphatic process: not recognizable until the bacilli pass from the lymph into the lungs. Discovery in the first stage is not

so difficult if anything happens to induce a careful examination. "If a person is ailing, loses weight, color or strength, or his vital functions are disordered, tuberculosis is to be sought." This is pretty sweeping, and shows how often Flick must have found this disease when it was sought on such general principles.

"If there was exposure to the disease it should be looked for." Early tuberculosis may not produce symptoms. Nothing should be taken for granted. There may be an occasional cough, hypersecretion of respiratory mucus, anorexia, malaise, especially in the forenoon, afternoon headache, nervous hyperesthesia, vivacity alternating with depression, slight fever, pulse faster, pupils dilated; slight bronchovesicular breathing or harsh breathing with pleuritic rub on expiration over the affected area, increased tactile fremitus and vocal resonance, slight bronchophony, impaired resonance. The signs are distinctly circumscribed.

The tendency is rather to recovery than to destruction. Treatment retraces the steps of development. He questions whether an infected person is ever completely freed from tubercle bacilli. Recovery means arrest of destruction and restoration to physiologic health. Very good, but it lasts only while the patient adheres to the life that brought it about. All that is needed for recovery from the earlier stages is a simple life, proper diet, fresh air and such medication as will restore the physiologic functions. If tissue is destroyed and mixed infection present, consumption of energy must be curtailed, the manufacture of energy encouraged.

Most of these cases can be cured. Begin with a week or two of rest in bed, followed by comparative rest, sitting up in the forenoon only; the up-time prolonged as results justify. Exercise follows as the condition indicates. The diet must suit each case: Flick's own being one solid meal a day, with 3 quarts of milk and 6 raw eggs for the balance. The one meal is liberal and varied—meat, vegetables, fruit; one hour to eat it in, thorough mastication, the food to be eaten with relish. If insufficient, fruit and nuts may be eaten between meals. Keep in

open air, day and night. Drafts may be disregarded.

"Much can be done to aid recovery from tuberculosis by the use of properly selected drugs." Dr. Flick uses, when needed, artificial digestants, eliminants, cardiac sedatives. One should use no drugs that dry up secretions and excretions and interfere with nature's recuperative processes. Opium and depressants are to be avoided. Symptoms should be regarded as nature's efforts at cure. Cough can be controlled by will-power. Secretions should be stimulated. Give no drug except for a specific reason in harmony with nature's laws, never to quiet the cry of an organ for relief.

There are no specifics here, but one drug of great value is iodine. He uses euophen by inunction, in the form of a saturated olive-oil solution, and praises it highly. He also uses glonoin, magnesium sulphate, strychnine, arsenic, pepsin, pancreatin, hydrochloric acid, phosphoric acid, sometimes digitalis, as they may be indicated.

It is better not to change from the accustomed climate. The regimen that cures should regulate the subsequent life of the patient. He must be trained to live properly in his old or new sphere.

Our doubts are traitors, and make us lose the good we oft might win, by fearing to attempt.—Shakespeare.

COMMON SENSE

"And with all your getting, get understanding."

In a recent number of *The Saturday Evening Post* appears one of those caricatures of the doctor which makes him ridiculous in the public estimation. The wife and mother in the story concludes to "take a rest," sends the children away, and the unwonted quiet and idleness make her a prey to imaginary evils. The doctor meekly accepts the situation, encourages the self-deception and "treats" her for an unnamed malady, with dark hints of its ghostly possibilities.

It seems queer that if there are such doctors they keep out of sight. Instead, we really meet some of this sort: A girl was

ailing, drooping and unable to eat or sleep. Finally the doctor was called; heard the story, made due examination, got up and said: "There's nothing the matter with the girl's bodily functions. She has something on her mind. Find out what it is. Good day!" Then the girl confessed—she wanted to go to college and could not summon courage to tell her parents so!

It is not well to take young girls too seriously—sometimes. But then again—

A lady walked into our office, pointed to a patch of chloasma on her face, and exclaimed in a tone of passionate earnestness, "Cure this or I take my life!" What folly it seemed—but investigation revealed the situation. She believed her husband had an "affinity," a surpassingly beautiful woman, while the discoloration rendered the wife not pleasing to view. It was deadly earnest with her; she meant what she said and would have carried out her threat, were it not that the malady was easily cured. Did this suffice to recall the husband's wandering affections? *Quien sabe?* Some woman says what men really fall in love with is a little pink face-powder.

No really successful doctor lacks common sense. Besides his medical lore and his skill in applying it, he is proficient in the broader knowledge of humanity that sheds such a side-light on the disease-picture. He is ready to puncture the swelling balloon of Fear, and to prick into consciousness the sluggish paresis of indifference; to reassure the apprehensive, to warn the neglectful, to restrain the self-indulgent. In very truth, a large knowledge of mankind, with but a small modicum of professional knowledge, is apt to succeed better than a profound versing in medicine with little or no realization of the tergiversations of men's and women's mental processes.

Let no man plead true worth with one breath and bewail his ill success with the next. True worth will make itself known and compel appreciation, else it is not all true—there's a flaw in the sapphire. "If you are a great general, come down and fight me," was the defiance hurled at Fabius. "If *you* are a great general you will make

me come down and fight," replied the wary old fox.

If you feel that you are not valued high enough, your estimate of your true worth is too high, or you fail to present your wares in acceptable shape. You may be trying to persuade the miller that little nubbins make better meal than fine big ears; or that little leghorn eggs are worth more than the big plymouth rocks. If you really "have the goods," you must be a poor sort if you can not make men realize this. If "the other doctor" knows so much less than you, and yet gets most of the practice, he must be a very much smarter man and able to use his little knowledge to better advantage than you do your greater stock. As a practical man, your own testimony shows his superiority.

Michigan says she raises better apples than Washington. The western pomologist selects the very best varieties, plants in the soil best suited, bestows on them all possible care, gives exactly enough water at exactly the best time, sprays the trees whenever codling moth or San Jose scale produces a brood, picks his fruit right, packs it right, advertises it right, and gets from three hundred to one thousand dollars an acre of net profit from his crop. Michigan has the advantage of saving a 2000-mile haul and has better-flavored fruit. She plants out an orchard, which she leaves to itself thereafter. If the apple crop is good, very well; if not, it's "the off year for apples." All the cultivation the trees get is what the hogs give by rooting; all the water is what the skies supply. Every apple may have a worm in it, and these men may realize thirty dollars an acre, with good luck. Washington forbids the export of a wormy or imperfect apple.

Brother doctor, if your bank-account is wormy, whose fault is it?

MUCK-RAKING WITH DISCRETION

Standing on the doorstep one day I saw a little dog gaily racing down the street. Suddenly from an open door dashed a larger

dog, took the little one full on his beam, and rolled him over and over in the gutter. The little dog recovered himself, took one glance at the aggressor, saw he was not in his class, and without an instant's hesitation tore off to where a still smaller puppy was sitting, wholly unconscious of the fray. On him the injured canine pounced, tumbled him over and took full satisfaction for the affront inflicted by the larger animal.

How very human!

Men go further, and do not wait for attack. A man gets into a position that enables him to attract notice. He is avid of the limelight; he wants reputation, to loom large before the admiring public, so he looks about for an opportunity. Here is a group of malefactors, men who are battenning on gains extorted from the fear, credulity, ignorance, of their fellow men. But—these scoundrels are rich and influential—one must be wary of incurring their displeasure. Better look about on the outskirts for some inconsiderable party whose guilt may be problematic, wholly technical, or perhaps merely lies in an inference with scarcely a shadow of reason and no evidence whatsoever. But the man can be attacked safely, and the difficulty of making his action out as wrong in itself testifies to the sharpness of the official quest of guilt. Altogether, much repute is to be won from such a case and no risk incurred. And so the innocent man is involved by an accusation that is in itself a smirch, and an expense that is ruinous; the fair name of Truth is dimmed, the public respect for Law as synonymous with Justice is weakened, and the elements in thought and sentiment that make toward the disintegration of society are quickened into activity; and all that some unprincipled rascal in authority may elevate himself.

We need a certain amount of muck-raking, but not of a kind that drags the petty official out of the mire and holds him up to the public gaze, while raising a gilded curtain before "the malefactor of great wealth". And in seeking truth let us go behind the veil of the external and seek to know motives, so shall we understand.



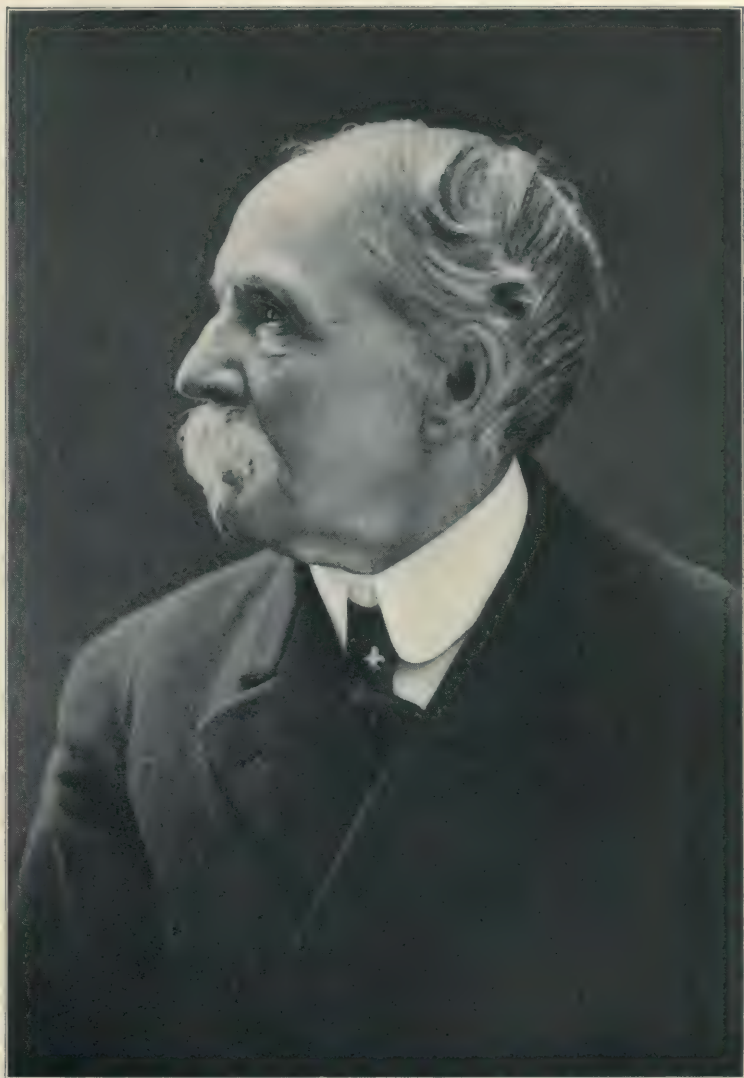
DR. E. M. EPSTEIN

DEAR OLD DOCTOR EPSTEIN! Now in his eighty-second year he still comes down daily to his desk in the Clinic office, and still delights us with his wholesome, kindly philosophy and profound erudition. He has had a varied career, as teacher, preacher, physician, naval surgeon and editor. How he came to be, and remains, an enthusiastic alkaloidist is told on another page. We are glad to have opportunity to give our friend and colleague this well-deserved honor.



DR. F. A. WALTERS

THE doctor apologizes for the youthful appearance of this picture, which was taken some years ago, but his good wife is authority for the statement that he is still young and still "looks good"; to her, as we know he does to us. Dr. Walters, who was formerly president of the Wisconsin State Homeopathic Medical Society, lives in Stevens Point. He is a pronounced and enthusiastic alkaloidist, and writes about "Rational Therapeutics" in this number of the Clinic.



DR. T. D. CROTHERS

PROBABLY the leading advocate in this country of scientific temperance reform, Dr. Crothers is active in the fight against "Giant Alcohol." This month he writes of the recent International Anti-Alcoholic Congress, held recently in London, to which he was an accredited delegate from the U. S. Government. Last year Dr. Crothers was the president of The American Medical Editors' Association. He lives and practises in Hartford, Connecticut.

Alkalometric Reminiscences

By E. M. EPSTEIN, A. M., M. D., Chicago, Illinois

EDITORIAL NOTE.—Dr. Epstein is not only one of the oldest of dosimetric practitioners; he is also the eldest member of the editorial staff of "The American Journal of Clinical Medicine." To do him honor, to show him something of our love and esteem, we have "featured" the good doctor somewhat in this issue. On a preceding page will be found a brief biographical sketch, and an excellent picture of Dr. Epstein, showing him just as he looks today.

MY alkaloidal experience from practice came to me some twenty-five years ago when, after having seen God's great world in different lands and seas and continents, as a practising physician, I settled down to practise in one of the oldest southwestern villages of the United States. It was with me the same as the founder of our method, Burggraeve, describes in his "Repertoire" of 1872 (p. 356), a welcoming attitude of the country physician to his happily conceived method of dosimetry:

"While the country physician's horse is trotting the man's mind is working. He has only one ambition, to cure; only one desire, to relieve. He cares little for renown, for he is satisfied with having simply done his duty, and his clients give him for that

less vexation than is often the lot of the city practitioner with his more pretentious patients. The country physician is therefore more prompt than his city fellow practitioner to welcome the dosimetric method and to swell the number of its ardent devotees. He is quick to see that this method does in reality not change the old medical practice which has endured for ages past and will endure because it rests on the enduring foundations of nature. Most of the new remedies he is using, too, are really not new by nature but only improved by the progress of

science and art in extracting the active principles from the remedies which he is familiar with for years past in his practice. The alkaloids and other plant active principles he uses now are the same, only more active, more reliable, more convenient than their parent plants. He soon learns to use their strongest remedies in proper dosage, and is no more afraid to use them than the skilful surgeon would be of a sharper knife in an operation. The only thing the country dosimetric physician is afraid of is the doing nothing with his safe and promptly acting remedies."

To me there was in alkalometry (the name I gave to dosimetry in this country) the yet additional moral inducement of its promise of reducing the sectarianism of the medical schools. Schiller, the immortal German



Dr. Epstein soon after he came to this country

poet, said he belonged to no sect-religion because he was a religious man, and so, because I am a physician, I belonged to no sect of medicine, and the alkalometric method of medicine afforded to my mind a system of therapeutics to which every educated and trained physician can readily subscribe. Educated physicians of the three great schools of medicine in this country, if they differ at all, do so in therapeutics, and so I had nothing to object to Burggraeve's idea of alkaloidotherapy. Nor was the idea of minimal and minute dosage foreign to me.

My great teacher in therapy, Alonzo Clark, of the College of Physicians and Surgeons of the University of the State of New York, more than merely hinted at the idea of fractionated doses in his lectures and clinics in the fifties of last century.

What was really new to me in this respect was the oft-repeating of the minute individually innocuous dose till the cumulated action of them produced the desired effect. The fact surprising to me when I saw it at my patients' bedside was that the cumulative action of a remedy could be so safely and so efficiently utilized in therapy, while I remembered the disastrous effects of cumulation with galenic preparations, notably with digitalis and veratrum viride. It gave me faith in the possibility of jugulating acute diseases at their start, a possibility which soon became a sure expectation by repeated happy results for my patients and reduction of my income.

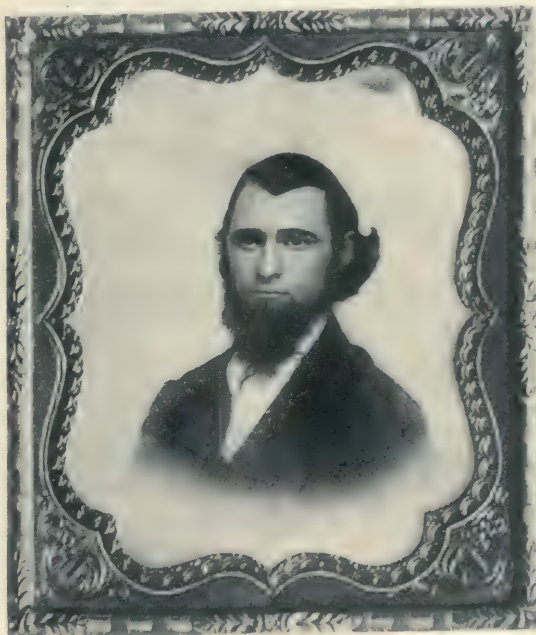
The fact that the number of remedies was so small in the alkalometric materia medica as compared with their multiplicity in that of the so-called allopathic, eclectic and homeopathic materia medicas was just to my taste. It reminded me of my good old-fashioned Prof. Gillman, who said to us in his closing lecture on Materia Medica: "Gentlemen, these many remedies are all of them official, but my private materia medica is a great deal smaller, and so will be yours after a year or two of practice. And a mighty good thing it is that we can get along so well with so few remedies with which we become thoroughly familiar."

I should like, when I get warmed up with these reminiscences of times when I was twenty-five years younger, to write of my experiences with alkalometry in the various diseases which came under my care, but I am reminded that I must spare both myself and my readers. I will, however, begin with my experience with fevers.

First Experience with the Alkaloids

Fever.—Aconite-root tincture I had given in fevers for many years before, and many a vial of it I had broken for me in my medical

pocket-case on my way to a patient, finding myself minus just what I wanted when I opened my moist-feeling case. When I was told that an aconitine (amorphous) granule of 1-134 grain would do well for a dose if I only repeated it sufficiently often till the pulse was reduced in frequency, I tried it on my next fever patient. But I was not confident enough of my new remedy so as to leave my vial with tincture of aconite root at home for



Dr. Epstein as he looked in his young manhood

the next few weeks—no, not me—for I always prefer to have a safe reserve. But the first trial proved a success and my supply bottle with Tinctura Aconiti Radicis remained an untouched sacred memorial of my conversion to alkaloidal practice. I do not remember a single case of disappointment with aconitine in fevers in all my subsequent practice.

What is fever? What causes it when there is no inflamed organ which we might blame for it? May it not be useful to talk a little while about it and ask how it is treated alka-

lometrically so successfully? Medical thinking ought to result in better medical practice, for medical thoughtlessness is the mother of routine, sectarianism, quackery, charlatanism, and a host of illegitimate sickly bastards.

There are various kinds of fever, such as ephemeral fever caused by transient gastrointestinal disorders, typhoid fever, paludic fever, the different eruptive fevers, syphilitic fever, several kinds of diathetic and dyscrasic fevers, and intoxication fevers. All these fevers are characterized by a more or less rapid pulse and higher temperature than normal.

The Pathogeny of Fever

The pathogeny of fever is variously conceived. Some think its origin is purely nervous, either from a hyperexcitation of the grand sympathetic or from a paralysis of the moderating nerve-center said to be situated at the union of the medulla oblongata with the pons. Others think fever to be the action of pyretogenic agents stimulating unduly the process of nutrition. You may accept the first or the second of these assumptions, or make a compound of both, yet one thing is certain, and that thing is most essential in the alkalometric successful treatment of fever.

It is to be remembered that no fever is ever a sign of a sthenic condition of the organism, but on the contrary, is always a sign of asthenia of the organism. And in passing let me say just here that the alkalometrist never treats medically a disease or a mere symptom of only an organ, but the entire organism, for "when one member (organ) suffers all the members (the organism) suffer with it."

Hence it is our (and I think exclusive) maxim that whenever a fever makes its appearance it is the imperious duty of the physician to sustain the patient's vital force for the very purpose of helping him to put out the fire that threatens to consume him now or ruin him for the demanding actions of life in time to come. I do not remember whether it was Burggræve or some of his early followers who coined the dosimetric

slogan: *La fièvre, voilà l'ennemi*. Yes, "fever is the enemy!"

And it is not often that this enemy is conquered by the vital powers of the patient, which in our day and especially in the unhygienic conditions of crowded localities is not to be relied upon, nor is it in better-conditioned localities, but in individuals debilitated by luxury, overwork and the results of vice, both unavoids and unavoidably inherited. Leave a raging fever to run like a prairie fire through the organism of some country alcoholic, or a city factory hand, or a hereditary-syphilis-tainted child, or a gonorrheally infected woman, fold your arms, do nothing, prescribe bread pills, and complacently affect profound contemplation on the "*vis medicatrix naturæ*," and ten to one, you lay there the sure foundation for future medical practice. This is the masterly practice of scientific (?) do-nothingism!

Value of Veratrum Viride

Before I was an alkalometrist I was not a medical nihilist. I gave in fever my orthodox calomel and jalap, or later on podophyllin and leptandrin, for to clear the bowels in fever is old orthodox practice, purposely neglected by homeopaths only of strict Hahnemannian observance in my younger days. I gave also tincture of aconite root as a liberal concession to the doctrine of *similia*, and when it did well I congratulated myself on my liberalism, and when the case went wrong I blamed the phantastic hyperminute doses. Bleeding I did not much, not even in pneumonia, for I early learned in my practice the substitutional value of Norwood's tincture of veratrum viride for venesection, and I even had the honor of introducing this preparation into the practice of the General Hospital of Vienna, through the late great Dr. Oppolzer, when I was an interne there in the sixties of last century.

Yet, for all that, I do not wish to be understood as being an unconditional antivenesectionist. There are cases in which venesection is imperatively indicated, and it would be practised, too, if our younger physicians knew how to do it. Let us hope that the

great advance of surgery in grand things will condescend to teach the present and coming generations of physicians this humble but useful minor surgery of venesection.

The Norwood's tincture of veratrum viride is certainly good in pneumonia but not any better than any other tincture in other febrile diseases. It will leave you sometimes in the lurch while at other times it will scare you to death, an observation you will begin to associate with your patient. And all this no matter how you administer the drops, whether many drops initially, then diminish their number, and the intervals, too, or fewer drops from the start and repeat at longer intervals. And, oh, what a pleasant surprise was the steady action of the veratrine granule, grain 1-134, to me when I first administered it in pneumonia, beginning with half-hour intervals and then longer and longer ones!

The question what the diet of a fever patient should be—whether a starving diet and so starve out the fever, or a generous one and so run the risk of nourishing the fever—was never clear in my mind till I learned the wonderful power of strychnine and its milder brother, brucine. I have known strychnine as an antiparalytic muscle remedy. But I know it now that it is pre-eminently a vitality-sustaining remedy, and our friends the enemies of other schools have learned it from French dosimetrists and American alkalometrists.

The Import of the Sympathetic Nerve

There is a wisdom (I prefer the simple word "wisdom"—Greek, *sophia*—to the pretentious compound *philosophia*, "friends

of wisdom," as though you and everybody else too were actually friends of wisdom), there is, I say, a wisdom in the use of strychnine in fever patients, founded upon the discovery of the great French physiologist, Claude Bernard of the last century, as to what the action of the great sympathetic nerve really is. His disciple, Mathias Duval, states that discovery in an admirably succinct way in these words:

"There exist two species of vasomotor nerves, viz., the vasoconstrictors and the vasodilators. Experimental experience shows that in connection with these two motor actions there are also two kinds of thermal phenomena, that the dilator nerves are at the same time *calorific*, heat-makers, while the constrictor nerves are *frigoric*, cold-makers. The nervous system seemed before and at first sight to be related to calorification only, the same as it is related to nutrition, and that is by the intermediate agency of the



Dr. Epstein in the uniform of an officer of the Austrian navy

blood circulation. But the experimental experience of Claude Bernard has led him to see an action in the grand sympathetic which differs from that of vasomotor action, and that this action has as a consequence a controlling activity (*sur-activité*) in the chemical changes of direct heat production. And inversely, too, it is not only because the nerves contract the blood-vessels that the vasoconstrictors produce the cold, but it is because they bridle and restrain the chemical movements of nutrition. In a word, the grand sympathetic exerts, apart from its vasomotor action, also a thermic action, a calorific action by means of its vasodilators and a frigoric action by its vasoconstrictors." ("Cours de Physiologie.")

It is evident, therefore, that we have in fever an excited condition of the grand sympathetic occasioning the paralysis of its vasomotor nerves and in consequence an abnormal elevation of the temperature of the entire body, due both to this paralysis and to the usual calorific action of the ganglionic nervous system.

The Rational Course for Fever

What, then, is to be done in the case? Wisdom says: "Tonify this nervous system! Remove the temporary paralysis of its vasomotor nerves! What with? Why? What were you taught to give in paralysis? Was it not strychnine? Then give it here, too. But not to children; for them the milder brucine is safer. Strychnine is a sustainer of vitality, and vitality always is the enemy of the body's enemies.

But strychnine is the remedy for only one indication, important as it is. And there are other indications. The body is on fire, the pulses beat, the heart is excited, the capillaries are congested; these call for aconitine. Give amorphous aconitine, grain 1-134 every ten, fifteen or thirty minutes, till you see an effect in a reduced pulse-beat and a steadier heart action. This same aconitine has also a great tonifying effect on the sympathetic and opposes the paralysis of its vasomotor fibers and so helps to decongest the capillaries and so to reduce temperature.

I soon learned to appreciate these wise reasonings, and the "Manuals" of Waugh and of Shaller and of Castro gave me the opportune counsel I often sought from them. They taught me how digitalin is to be han-

dled as a cardiac in fever. I used to fear the cumulative action of this remedy which comes on you like a mad dog without a bark and from behind all on a sudden. What a veritable revelation were, then, to me the words: "The active principle (digitalin) in minimal fractionated doses, often repeated till effect." I obeyed the voice, and I never regretted it. I gave at first these remedies each apart, and they did well, but I soon found that a combination of the three, strychnine, aconitine (amorphous) and digitalin do far better at a certain stage of the fever than aconitine alone, which latter may be continued by itself for some time, if not contraindicated,

and at long intervals when that triad (I dislike the profane use of the term trinity) had produced the effect desired.

I see I have written long and must bid me enough! But I cannot close these reminiscences without this honest confession, that never before in my practice, which began in 1859, did I have that confidence in medication and

medicaments as I gained, and never lost, since I began to use alkaloids, including glucosides, resinoids and concentrations, and the alkalometric (dosimetric) method.

Were I younger and were there many years of life, humanly speaking, before me, they would be devoted to the service of the alkalometric cause. Whoever works in this cause works not for himself but for God, for Truth and for Humanity.

And wishing my readers a Happy New Year, I remain,

Fraternally theirs,
EPHRAIM M. EPSTEIN, M. D., A. M.



Spotted Weasel and his wife, and Henry Bad Gun (See next page)

Reminiscences of Medical Practice Among the Indians

By JAMES L. NEAVE, M. D., Dresden, Ohio

II

SO far as obstetrics is concerned there was not much doing, that is, not for the doctor—and I cannot say that I was very sorry. This line of practice also had its peculiarities which I was glad to be permitted to understand. Outside of emergency-cases I was never called to attend a childbirth. When I did get a call I would always be certain of something interesting. The woman never lay on a bed but upon a pallet on the ground; and all attendance was perforce rendered kneeling.

What the procedure of the Indian attendant at such a crisis was I could never ascertain. This much I did learn, however. When the Indian were on any of their travels and the woman was taken with the pains of labor, it was customary for some old woman to stay with her, while the rest moved on. This old woman squatted on the ground with her back against anything solid—a tree if one was handy. The woman to be delivered sat down in the space formed by the old woman's spreading thighs and her back against the breast of the attendant, who, clasping her hands over the parturient's abdomen, literally squeezed out the child. Everything generally came away at once, and the new mother, picking up her new-born babe, they hurried on after the moving body of Indians.

Some "Lightning" Labors

Our washerwoman, Two-Bears by name, whose home was a mile from our house, came to my wife in the middle of one afternoon and said she wanted to go home as she was in labor, the water having broken. She walked one mile, reached her home, when the child was born just as she entered the doorway. She sent word that she would be at our house on the following day and do the ironing—but we thought best not to let her me.

At one time the trader, whose store was on the edge of the village, saw a group of Indian women coming toward the store, each carrying a load of fagots on her back. Suddenly one of them stopped, threw down her load, spread apart her legs, strained a moment, then drawing her knife from her sheath made a quick pass in front of her, down toward the ground, picked up something, and passed on into the village, leaving her bundle of fagots for someone else to take care of. That was a confinement!

At another time I was called to the house of a prominent Indian whose wife was unable to complete her confinement. I found her lying on her pallet on the ground, the child removed and the placenta retained. The cord was tied to her thigh by a piece of string to prevent its being sucked up, and I was not permitted to untie this string. I found the placenta firmly held in the womb. I explained to them that I should have to use chloroform and remove the placenta by introducing my hand.

Delivering a Woman Under Armed Protection

Some of the Indian medicine-men who were in the house professionally demurred and requested me to give the woman some snuff so she would "sneeze it out." I persisted in handling the case in my way and they sought to prevent me by forcibly ejecting me from the house. Finally the husband turned to me and asked me if I would be just as careful in handling his wife as I would be if it were my own wife whom I was treating. Receiving an affirmative answer he told me to go ahead, and then stepping between me and the medicine-men, he drew a big 45-caliber Remington revolver and told them he would kill the first man that made a move toward interfering with me—and he meant just what he said, and they knew it. I introduced my hand into the uterus under chloroform, overcoming an hour-glass con-

traction, by the hardest kind of work, and removed the placenta successfully. My patient eventually recovered without any untoward symptoms. This was my first and only experience in doing work of this kind under the protection of artillery.

Abortions and How Produced

Abortions were frequent among these people. The method was simple enough. With the patient lying on the pallet, two



A Half-Breed Interpreter and a Full-Blooded Crow Indian

women, selected for their brawn, knelt one on each side and literally kneaded the woman's abdomen with their fists until they forced and completed the abortion. The fetus would be wrapped up in some heavy cloths and placed in the branches of a tree that stood some distance from the Missouri River. And this tree was a sight—hanging full with that kind of fruit; showing the frequency of abortions. In course of time, the Missouri cut its way toward this tree, until it was finally undermined, toppled into the stream, and was carried away by the current. As the tree fell, all the abortion-babies screamed. I have the word of some of the squaws for this statement. They were watching the tree as it fell, and they bore witness to the screams of fright. I merely give

the testimony of these women. I did not witness the occurrence myself.

One Indian woman who was frequently in the habit of getting rid of babies by the abortion-route once tried a new method. She seated herself on the bottom of a heavy farm wagon, directly over the hind axle, and then had an Indian drive rapidly for some miles over the roughest ground he could find, rocks preferred, wherever he could strike them. She succeeded in accomplishing her object, but the operation so injured her that she died not long afterward.

Many of the Indian dead were "buried" on scaffolds standing six or seven feet high. The cemetery lay close to our village, and I often passed through it. As did others before him, a young New Yorker who was visiting the Agency thought it very strange indeed that I did not possess an Indian skull, when they were lying about on the ground and could be had by simply picking one up. I told him that it was not lack of interest on my part that I had no Indian skull, but it was because I put a greater value upon my own, alive, than upon an Indian specimen, dead. I advised him to let them alone, as it was impossible

for him to get one, unperceived, and it would be disastrous to himself.

One day he came into my dispensary, white as a sheet and shaking as though with the ague. After encouraging him with a free exhibition of whisky I got his story. He had intended returning to New York with an Indian skull, despite my warning. So, supplying himself with a grain-sack, he passed through the cemetery afoot, when there was not an Indian in sight. Passing close to a good specimen that he had previously noticed, he quickly popped it into the sack and started on almost without a halt. He had gone but a step or two, when he heard the exclamation, "Huh!" and glancing in the direction of the voice, found himself covered by a Winchester rifle, aimed by an

Indian who lay at full length on the ground, making a downward motion with one hand. I asked him, "Did you drop the skull?" My friend cheerfully acknowledged that he did. Then I asked him to tell me what the muzzle of that rifle seemed like when he looked down it. His reply was, that it looked as big as a flour-barrel. I came away from that region with only my own skull; and my professional friends will understand why I remained satisfied with that alone.

The Indian's idea of medicine differs from ours very materially. Our medicine is supposed to be taken internally, in the treatment of disease. Their's is supposed to work by the charm-method, and is used externally. At a certain time during the hot summer months the medicine-men collect branches from certain trees and shrubs, those having odor preferred, and place them out on the open prairie in the hot sun. Then they sit solemnly around, in a circle, silently smoking. When the leaves are sufficiently dry, the head medicine-man arises, blows the smoke from his mouth, and waves his pipe to the four quarters of the compass and to the zenith, propitiating the Great Spirit. Then the dried leaves are collected mixed up and broken between the hands, put into bags, and distributed, one each to the medicine-men in the circle. Then they are ready to combat disease.

Called in to see a patient, they take a skillet and put in some live coals; then, after sprinkling a pinch of the dried leaves on the coals, they pass the skillet under the blanket covering the patient, permitting the smoke to pass over the body. Some element in the mixture of leaves is supposed to have a remedial action on the special disease they are treating. All they have to do is to smoke up the patient. Or the sweat-house will be used—the patient after being thoroughly sweated sometimes taking a plunge into the river, even in winter with the thermometer

below zero. The sweat-house and plunge-bath in the icy water was their treatment for smallpox—and it was invariably successful in killing the patient. Occasionally they would omit the bath, and would simply walk home, dressed in a bed-sheet.

The sweat-house was made by covering a circular frame work of willows, maybe six feet in diameter and four feet high, with skins or quilts. Into this they would pack as many Indians as could be accommodated.



Black Tongue the Head Medicine-Man

The medicine-man was inside also, sprinkling water upon heated stones, to make steam. Consumptives, fever-patients, victims of syphilis in its various forms, no matter what affliction anyone had, all were huddled together, naked. Sanitary? I guess not.

How the Sick Were Allowed to Die

Regarding the wind-up of serious cases. The Indians did not like the idea of anyone dying in a house, on account of the spirit pottering about ever afterward. So I have known them, when they were certain that death was almost at hand, to take the sick one out of doors and let him die there. I have seen a patient, dying of pneumonia, placed in a shed open on three sides, just outside the door of the house, and allowed

to draw his last breath there, with the thermometer twenty-five below zero.

But speaking about exposure to cold, I have seen children ten years of age playing whip-top under a similar shed, with the temperature just as low, and they without a particle of clothing on their little bodies. And they were enjoying themselves and did not get sick either. Also I have seen men seat themselves out-doors in the sun, with their backs protected from any wind with a buffalo robe thrown loosely over their



Bastion of the old blockhouse, Fort
Berthold, N. D.

shoulders, entirely exposed in front, and clad only in breech-cloth and moccasins, with the thermometer ranging around 20° below zero—and they sat there and smoked. Certainly they did look cold to me.

I have remarked about Indians not bearing pain well. However, if they are nerved up to it under the excitement of some religious rite, they will bear the most terrible pain without flinching. Or if a prisoner is tortured by his captors, he will bear pain stoically, because that is a matter of pride, he considering himself disgraced should he flinch then. But place an Indian in a position where there is no glory to be obtained by a manifestation of bravery, and he simply will not stand any pain whatever. He won't permit the use of a knife under any circumstances; and I don't remember ever having used one, for any purpose.

I do remember once pulling a tooth for an adult Indian. He came to my dispensary, bringing with him his squaw as well as a good-sized toothache—at least I at first supposed that he brought the squaw, but as a matter of fact the reverse proved to be the truth. I found a decayed molar in the ruddy gentleman's mouth, and I at once proposed extraction. I hid the forceps in my hand and approached the patient. He demanded to see the forceps and refused to let me do anything unless he was permitted to see. At last I showed the instrument to him, whereupon he let out a roar, sprang from his seat and out through the doorway, and sprinted for home, with his squaw after him. When his faithful spouse had caught him, she drove him back, using force and plenty of language. Returning, he collapsed into a chair and opened his depot to its fullest extent. I got the tooth all right, but he gave one prolonged yell and rushed toward his wigwam, running like a deer, howling at every jump, and the woman after him, with her tongue operating as fast as her feet. She didn't catch up with him this time—and he may be running yet, for all I know to the contrary.

The Indian Sun Dance

If the Indian can make a spectacle of himself, and prove himself a "brave" by means of a semireligious ceremony, then he can stand pain. As witness the sun-dance, happily now prohibited by the government, which may be described.

The candidate for honors prepares himself by fasting for several days. At the appointed time he is stretched out on the ground upon his back. Two medicine-men kneel on either side of him and each with his knife cuts two parallel gashes, two and one-half to three inches in length and about one inch apart, through the skin over the pectoral muscles. Each medicine-man dissects up his strip sufficiently to pass a rawhide lariat readily beneath. This is done, the lariat being tied strongly in a loop. The candidate is then allowed to get up, and he is conducted into the especially prepared medicine-lodge, a huge affair, constructed like a dirt

lodge, already described, only instead of using dirt an extra-heavy covering of branches is laid on. The free end of the lariat is now tied to the top of the medicine-pole, fifteen feet above his head; and he is permitted to dance about, throwing his body back and straining on the lariat until it finally tears itself loose through both strips of skin—and he is not permitted to ease the strain by taking hold of the lariat with his hands.

This performance lasts for hours, and the reader can imagine the effect on the candidate, both mentally and physically. The candidate is worked up to a perfect frenzy, hardly capable of knowing what he is doing. The lodge is closed except for the opening at the top; piles of brush are kept constantly blazing, making the only light, barring what little filters in at the top through the smoke; the place is crowded in every available spot excepting in the center; the drums are beating monotonously; some hidden squaws are chanting a wild, wierd, monotonous, tuneless chant; the flickering fire-light; the suppressed excitement; the peculiar sounds; the almost maniacal candidates, dancing about at the ends of their lariats; the circle of eager faces, showing wierdly in the fire-light; with the wavering appearance over all, caused by the smoke and heat. It is a picture that impresses itself indelibly upon all who have been so fortunate (?) as to have witnessed it.

Other Methods of Making "Braves"

I was told of another method that was occasionally resorted to for making "braves" in the sun-dance. This was the insertion of hooks into the small of the back; the candidate then being swung up like a spider and allowed to kick until free. I did not witness this style, however, and know that the former method is certainly the more popular one. Either is horrible enough and seems to represent the limit of human endurance.

Sometimes outraged nature rebelled, and endurance was strained to the breaking point—the candidate sometimes fainting, and rendered unable to continue—sometimes nature absolutely refusing to permit the candidate ever to finish.

Another trial would be allowed the following year, if the candidate desired; when, if he went through the ordeal, he won the



Dirt Lodge in the Indian Village, Fort Berthold, N. D.

coveted title of "brave." Once the trial was undertaken, the candidate was bound to complete it, in either the first or second trial. If he finally failed, he was forever driven from association with men, and was condemned to dress like a squaw, work in the fields with the squaws, and be with them for the remainder of his life. And this banishment had no sexual compensation with it, either.

I was never able to ascertain exactly just what was done with these luckless victims, but had reason to believe that mutilation—castration—was resorted to as punishment for failure, and to prevent anything from happening on account of this intimate association with squaws. There were three of these men-women in the village where I was located. They all had high-pitched

voices. I had occasion once to make a manual examination near that region and tried repeatedly to obtain ocular or manual information, but was carefully blocked every time. Neither could I get any information from the half-breeds who could talk good English. The subject evidently was taboo; and everytime I tried for information I got a different story.

After the Government's prohibition of the sun-dance I witnessed a modified form of the ceremony. This time there was no lodge built, but everything was done out of doors.

One set of candidates had their skin slit on the chest, as before described. Two lariats were used; one tied through one loosened skin ribbon, and the other, fastened the same way, through the other side. One horseman picked up one lariat, and another the other one, and they rode around and around, holding the lariats taut, with the candidate dancing and jumping between them, until the ropes tore their way through. Another set of candidates had the skin ribbons raised on the small of the back, the lariat run through and tied, and on the free end of the lariat was tied a buffalo skull. The candidate jumped and ran about with the skull bumping over the prairie's knolls until the thong tore out. Yes, they could stand lots of pain if the occasion was sufficiently spectacular.

The "Graduation Ceremonies" of an Indian "Medical College"

I attended a session of their medical college at one time and witnessed the graduation ceremonies, which were unique, to say the least. The ceremonies that I was allowed to see occurred in the large open court in front of the big medicine lodge. The candidates were inside the lodge, and all I could hear was a great deal of noise coming from the big gourd medicine-rattles. Suddenly a number of young men, entirely naked excepting for breech-cloth and moc-casins, came dashing through the skin door, with every manifestation of alarm. After running about a few moments in a confused sort of way, they as suddenly dashed up on top of the medicine lodge, where they lay

down at full length. Next, certain attendants dashed up to the doorway, having branches in their hands with which they beat the ground, raising as much dust as possible. Gradually they retreated, and out through the doorway, leaping and throwing his arms, dashed the devil ("evil spirit" the Indians call him).

Certainly this make-believe devil looked like Old Nick himself. He also was naked like the others, but he had an entire buffalo hide, head, horns and all, attached to his head, with horns in place and the robe and tail streaming out behind him. He was frightfully painted, had two long peeled willow tusks protruding downwards from the upper jaw, and was emitting something from his mouth that looked like dull red fire and smoke. As soon as he came thoroughly into view, the students immediately rolled off from the medicine lodge, down to the ground, and lay about in all directions, in convulsions, retching and going through the motions of vomiting and acting as though their entire insides would come up; and kept this up while the devil cavorted about the court. Finally the horned gentleman disappeared into the medicine lodge, the attendants ran up to the still struggling students and beat them with their branches, and then suddenly they all sprang to their feet and rushed through the doorway into the building. This performance was repeated several times.

The rest of the rites were out of sight of the audience, we being able to hear only plenty of rattling from the medicine-gourds. But the class were graduated before they came out and became full-fledged medicine-men, fully equipped to practise their rites upon any unfortunate desiring to be humbugged.

Eye Troubles and Their Cause

Two sources of irritation about the eyes were sandstorms in summer and snow-blindness in winter. The sandstorms were caused by the wind picking up the sand along the river—which was always low in summer, exposing miles of sand bar—and so filling the air with the sharp, fine grains

that nothing was free from these flying particles. A person out in one of these storms was sure to suffer in the nose, throat and eyes, particularly the latter; and unless care was taken the irritation of the eyes was likely to become serious. The Indians were the opposite of sanitary and were careless in the extreme, and suffered accordingly. The best way to avoid these storms was to remain indoors while they lasted, which was usually two or three days. The only redeeming thing about a sandstorm was that it did not come in a hurry but gave notice, as it were, of its appearance.

Snow-blindness was a catastrophe. The writer had one pronounced attack and knows whereof he speaks. The experience may be something to refer to, but he does not want any more of it. The sensation is as though someone had his thumbs under the affected eyeballs, and was trying to force them out of their sockets. The only relief that I obtained was the free use of morphine to relieve the terrible pain and the application of a bandage about the eyes, tied in a single knot behind the head, and then constantly drawn tight to make pressure on the eyeballs in order to counteract the sensation of the eyes being pushed out.

Snow-Blindness and Its Effect

The effects of the snow-blindness seem to be lasting. To this day the writer has to be careful about being out very long on a bright winter day, with the sun shining on the freshly fallen snow. There remains an inability to withstand long the glare and it becomes necessary to resort to smoked glasses for a few days until the snow becomes dirty and the glare lessens.

Snow-blindness is caused, of course, by the sun shining brightly upon an expanse of snow where there is no shade to break the glare. In Dakota, where I was stationed, there was, except immediately along the river, an entire absence of trees to throw a shadow; no houses except at certain points; no bushes; no anything to break the glare. The country was almost a dead level and the horizon was unbroken by hill or bluff. The snow was glaringly white, the cold was

so intense that there was no surface melting at any time during the day—30 below zero was frequent, and from there down to 50 below zero, while 20 below was common. The frost spangles remained on the snow all day, dazzlingly beautiful, but terribly irritating after awhile.

When conditions became aggravated by being exposed to the glare for a time the approaching attack showed itself as follows: I seemed to be on an immense level, white expanse, sparkling, glittering, apparently waving, with a brightly shining dome covering everything like an immense inverted bowl, and turn which way I would, the sun like a ball of fire was apparently suspended directly before my eyes. Sharp pains as of arrows soon began shooting through the eyes and I was glad to get into the house and into the dark and stay there for several days. With the Indians the results are generally permanent, and I found colored glasses to be in common use—in many instances worn constantly the year around.

I saw one white man suffering with an attack of this trouble. He lay face down in a wagon, covered head and all with a buffalo robe and suffering the tortures of the damned. He let me have just an instantaneous glance at his eyes. They looked like raw beefsteak. He was merely being taken through the Agency and I had nothing to do with the case beyond giving him an opiate to relieve him partially until he could reach his destination.

Insanity Is Rare Among the Indians

During my seven-years' stay among the Indians I saw but one case of insanity. Even this one could hardly be credited to that race as the woman was of mixed blood, with considerably more white than Indian blood in her veins. The woman always seemed happy, never in a bad humor, whatever happened. She had a great desire to get into someone's house. She would appear suddenly at the Agency and walk rapidly around and around the houses, trying first one door and then another, keeping it up for hours at a time; then would disappear suddenly as she appeared. One evening while

my wife was lying on the bed getting our little one to sleep, she was startled upon glancing up to see "Mag" leaning over the footboard, smiling affably. She had come to sell a pair of crazily made gloves.

One bright moonlight evening, the thermometer 30 below zero, my door suddenly opened and in walked crazy Mag just as though she belonged in my house. After quite a time I got her started homeward and resumed my interrupted reading. I had hardly got settled when there was a startling rap at my door and I found a relative of Mag inquiring for her. Upon my telling him that I had started her toward her home, a mile distant, he disappeared on a run to find her. In a very short time he returned with a two-horse wagon, the horses on the run. Hurriedly notifying the agent of his intentions, he drove through toward the military post, seventeen miles distant, traveling as rapidly as he could force his horses, and found Mag sitting at the fireside of one of the officers, happy and contented. Instead of continuing on the way home she had turned back, passed through the agency, walked the entire distance, losing one of her moccasins on the trip, and had reached the post some time ahead of the rapidly driven team following on her trail.

Trouble with "Mag"

Again the woman came to the agency one winter afternoon and took possession of the office. The first I knew of it, one of the employes came running to my house and told me that Crazy Mag would soon have the office afire unless I could use my influence to get her away. I immediately crossed over and found the situation dangerous indeed. If the office caught fire, it meant the probable destruction of the entire lot of agency buildings, as we were without fire protection. And this in the dead of winter would have been a catastrophe. The stove in the office was a huge sheet-iron affair, at least two and a half feet in diameter and more than four and a half feet high. The room was a low-ceiling affair, sealed throughout with matched flooring boards, the stove-pipe running through the ceiling into the

room above. The fuel used was cotton-wood logs, inflammable as pine.

I found Mag in the room in perfect good humor and enjoying herself. She had filled the stove with fuel, standing the pieces on end so as to facilitate burning. The stove and the pipe were red-hot, the ceiling smoking and just ready to break into a blaze. Mag was engaged in putting in more wood, and with her knife in her hand threatened to kill anyone that dared to interfere. Nobody ventured to lay a hand on her; no one dared knock her down, as that would mean the probable massacre of all the whites at the agency. Quick action was needed and there was no time for parley. I was the medicine-man and felt I could do what no one else could, and I took the chance. I walked up to her, addressed her quietly in her own language, and placing my hand on her shoulder told her I was going to her home and that I wanted her to come along. She immediately put her up knife into its sheath and said she would do anything I wished her to do; and I got her out and delivered her over to her people.

One of the other queer escapades involved one of her own people. She invited the old interpreter into her house to have some soup of which Indians are especially fond. He accepted the invitation and partook of dog soup, as he supposed. When she undertook to ladle some more out for him he discovered a child's head bobbing about in the kettle. Mag had dug up a baby that had just been buried, had cut off the head and made soup of it; and had the dead body wrapped up and cared for as though it was her own baby and alive. There was a sensation just about that time. Poor Mag was eventually frozen to death. In some aberration of instinct she had evidently lost her way one night and was found the next morning lying dead on the bluff near my house.

These reminiscences might be continued, but enough has been written to illustrate that practice among these people has its peculiarities. While some portions of this narrative are not strictly medical, they have been written because of their bearing upon practice among these people.

Drug Treatment for Gall-Bladder Troubles

By EDWARD A. TRACY, M. D., Boston, Massachusetts

Orthopedic Surgeon to Mt. Sinai Hospital

IT may seem strange for an orthopedic surgeon to write upon this subject; an explanatory word or two, therefore, may not be amiss. For several years the writer practised general medicine, taking particular interest in orthopedic cases because of the bent of his natural inclinations, until from one cause or another the larger part of his practice is now in orthopedic work. Interest in general medicine, however, has been retained for several reasons: the subject is so large, furnishing endless problems for consideration, that it is ever interesting; treatment by active principles is productive of such positive therapeutic results; old patients continue to come for general treatment, and while memory lasts the patients who entrusted themselves to us in our early days of practice will command our best service to the end. So that as a general practitioner I may fairly have the privilege, indeed, it seems an obligation, to write on the subject of the medical treatment of gall-bladder troubles.

Some of the Difficult Cases

For the most part these are gallstone-cases; but in the individual case it is sometimes impossible to determine that a gallstone is at the bottom of the trouble. Maurice H. Richardson, Boston's brilliant surgeon, has operated for supposed gallstones and found an acutely dilated gall-bladder without a gallstone anywhere. He has also found gallstones where there were no symptoms of the trouble.

A gall-bladder case may be considered one in which there is gastroenteric disturbance associated with well-defined tenderness in the region of the gall-bladder. Fever, pain and vomiting are frequently present. Jaundice or yellowness of the conjunctivæ, or bile in the urine, each or all may or may not be present. When present, any one of these signs is important from its usual connection with abnormal distribution of the contents

of the gall-bladder—bile. Differentiation of the gastrointestinal symptoms from those produced by neuroses and diseased conditions of the stomach and intestine is made chiefly by the well-defined area of tenderness in the region of the gall-bladder, together with absence of such tenderness in other parts of the belly usually affected by appendicitis, gastric and duodenal ulcers, oophoritis, salpingitis, etc.

The Gallstone Colics

Not rarely we are introduced to such cases by an attack of gallstone-colic. Good treatment for this, and in fact all colics, is hyoscyamine or atropine, glonoin and dioscorein, all given to effect, the object being to obtain relaxation of the involuntary muscle-fibers of the tubes affected by the colics—ureteral, intestinal, or gall-duct-tube, as the case may be. The terrible pain is caused by the spasmodic contractures of these muscles and ceases when they relax.

At the commencement of treatment sometimes morphine may be advisable, in which case the combination of hyoscyne, morphine and cactin works well in quelling pain and producing rest.

The stomach needs sedation and aerated Vichy water or plain soda (carbonic-acid) water with grape juice is found grateful. The bowels should be kept emptied by a saline laxative; the diet should be carefully attended to, albuminoids being given sparsely, while fats are not well borne. Boldine is of real value in bringing about a normal action of the liver, gall-bladder and the duct.

Sodium Succinate Is Curative

When the acute symptoms have disappeared, sodium succinate has a curative action in these cases. It should be given in 5-grain doses dissolved in a glass of water, every three hours during the daytime. This agent should be used faithfully from ten to twelve months. During the past ten years

I have employed sodium succinate in the treatment of at least a dozen cases of gall-bladder trouble, most of them diagnosed as gallstones, with good results in all of them. I submit the last case treated, the details of which are fairly fresh in memory, as an example of these cases. The notes of this

disturbed more or less with gas in stomach and bowels; also with irregular action of bowels induced by an acute gastroenteric attack.

"Two weeks ago a chill followed by pain in epigastrium and right hypochondrium; confined to bed. Seen by Dr. Tracy Nov.



DR. EDWARD A. TRACY

case containing the history together with the signs and symptoms observed by me diurnally, and the medication given, were inadvertently destroyed. However, Dr. R. H. Fitz, who saw the patient in consultation, kindly furnished me with an abstract of notes on the case, and this is here appended:

"E. M. H., real-estate business, age 52 years, single; good family history; no severe illness or accident; good habits; moderate use of tobacco and alcohol; average weight 190 pounds. For past thirty years has been

6, after an attack of vomiting. Temperature, 102.5°F., pulse 120. Moderate tenderness in region of gall-bladder. Next day temperature normal, pulse 88; urine, 1020; no albumin, dark-brown, froth greenish; feces whitish; chilly; vomiting; increased tenderness near gall-bladder. November 8, temperature slightly elevated, pulse 96; no definite cutaneous jaundice but conjunctivæ slightly yellow. November 10, chilly, vomiting; wakeful; epigastric distress; no pain. Today better; but slight tenderness in deep

pressure in region of gall-bladder; no tumor; no hepatic enlargement. Diagnosis: acute cholecystitis (gallstone?)."

Operation was considered and advised against. Under the treatment outlined above the patient recovered from this attack. Since then he has had two milder attacks, one of which was due to indiscretion in diet. He has been entirely well for seven months. He has continued taking from the first sodium succinate and boldine. From observation of the action of sodium succinate in similar cases I believe that in the future he will continue free from trouble of the gall-bladder.

About Dr. Fitz, the consultant in this case, let me say a few words. The writer had the privilege of being a student in pathology under him at Harvard, in 1890-1. His contributions to pathology and diagnostics make his fame secure for all time. His work on appendicitis (the very term was introduced by him in 1886) and pancreatitis is brilliant. The students under him were taught accurate observation and clear thinking by example. Many times have I been fortunate in having him for a consultant, and it has always been an intellectual treat to witness his thoroughness of examination, both into the history and into the condition of the organs. Thoroughness, united with a logical mind, is doubtless the secret of his greatness.

Drugs vs. the Knife in Gallstone-Cases

A further word may be permitted me, though outside the scope of the title of this paper, a word on gall-bladder surgery. Much of it is being done. Good will come of it in settling the limitations of surgical intervention in this field. Only surgical enthusiasts, blind to the clinical experience of others, will assert that the knife is the sole remedy for the above conditions. Richardson has advised drug-treatment after op-

erating for gallstones, to prevent the need of a second operation for recurrence of stones. I have no doubt of the efficacy of such treatment in the prevention of gallstone formation, and further, I agree with able clinicians who have seen gallstone-cases favorably influenced, in fact cured, solely by drug-treatment.

How Does It Act?

Waugh, of Chicago (to whose writings the author owes his knowledge of and experience with the sodium-succinate treatment outlined above) doesn't explain fully the action of the remedy in these cases, and is skeptical of the solution of the stones ever being effected. It seems to the writer that there may be some solution of the stones effected. Knowing, as we do, somewhat of the solvent powers of the blood and fluids of the body, it would seem somewhat dogmatic to assert that such solution is impossible or improbable. This is a question, however, that may be settled in the not distant future.

At a recent meeting of a local medical society, Dr. Percy Brown, the Boston specialist in x-ray work, gave an exhibition of x-ray plates showing beautifully some abnormal conditions of the stomach and bowels, defined through the progress of a bismuth meal through these viscera. In the general discussion which followed, the writer suggested, as Dr. Brown had stated that x-rays diagnosed gallstones, that the method be used to determine the ratio of individuals in the community with gallstones without symptoms. That there are such cases the pathologists teach from the finding of gallstones in the dead, who gave no symptoms of them during life. I would further here suggest that the method be used on patients with gallstones to watch the effect of sodium-succinate treatment. If the remedy has a solvent action, the x-ray plates would show it.



with ever-increasing frequency. The writers can not now be held up as of "the alkaloidal crowd"—if so, that same "crowd" seems to be getting to be a pretty numerous one of late years.

The difficulties in the way of the general adoption of this method have been, (1) the alleged commercial nature of the movement, (2) the ultrascientific character of the qualifications demanded for its application, and (3) the inveterate habit of the profession that makes it impossible for the old-timer to change his ways.

The first objection falls to the ground through its absurdity (proprietary medicine must be secret or otherwise monopolized), besides being a *non sequitur*, and recognized

as such by the practical physician who asks first and last as to the utility.

The second difficulty vanishes upon trial, and the physician soon realizes the ease of this natural method of prescribing for what he sees to be wrong in the patient, instead of the old, warped, unnatural method that laid on the doctor such a paralyzing burden.

The third difficulty is in the way of solution, as school after school takes up the work of teaching scientific therapeutics, and the students flock to such schools by preference.

The outlook is full of promise. The medical profession as a body is too practical to be deceived. In matters where the doctor is judge and jury at once he will decide for himself, and decide rightly.

The International Anti-Alcoholic Congress

A Medical Review of its Work

By T. D. CROTHERS, M. D., Hartford, Connecticut

BOTH the lay and medical press of this country seem to be under the misapprehension that this Congress was simply a gathering of enthusiastic reformers whose principal purpose was to show the evil effects of alcohol. In reality it was the twelfth great open parliament or congress of teachers, doctors and reformers for the general discussion of the topic of alcohol and the evils which come from it.

More than a quarter of a century ago these gatherings began in the different cities of Europe, at intervals of two years, and while papers of the most radical character were read and discussed, there were no resolutions passed endorsing any dogmas or theories, or committing the Congress as a whole to any statements or theories. It was simply an open discussion, without dogmatic conclusions set forth as facts, which the Congress supported.

The magnitude of these gatherings and the importance of the papers read assumed a national character in 1907, and the Swedish Government took the Congress under its special control and made it an inter-

national affair, inviting delegates from all over the world to participate. The success of this meeting, and its contributions to both the sociological and medical sides of the subject created a great sensation in Europe.

The Congress Under the Patronage of the British Government

The result was that the British Government invited the next Congress to convene at London and gave it more prominent official recognition. The Home Secretary issued formal invitations to every civilized country to send officially appointed delegates to take part in this Congress. Sixty men appeared from the different governments, nearly all diplomats, teachers, physicians and officers of the respective governments. Almost every temperance and reform society in the world sent delegates, and all the great church organizations were represented.

Then came an army of interested persons who were made members of the Congress. In all, over 1400 were registered, making it the largest gathering for the discussion of

the alcoholic problem ever held. The Duke of Connaught was Honorary President.

The Congress was divided into two sections, the sociological and the scientific. Forty papers were read in these different sections, and discussed. As abstracts of each paper were printed in three languages and distributed freely, it was possible to follow every speaker and to know what he was saying. Both at St. Paul and the Westminster Cathedrals opening sermons were preached, introducing the topics of alcohol and its effects. The first general meeting was presided over by Lord Weardale, one of the Government secretaries, who delivered an address and welcomed the assemblage in the name of the Government. A public reception was given by the Government in the evening.

Work of the Sociological Section

In the sociological section the educational influence of efforts to diminish the evils of alcohol was a subject of many papers, both by physicians and clergymen, but all of a popular character. In another section alcohol and its effects on children and its relations to the home, and the legal protection of children, was the subject of several very strong papers.

The question of the action of alcohol on public service brought out several papers on the legal, naval, military, postal and railway employments. One session was devoted to alcohol and its relation to vital statistics. This was discussed in many technical papers, several of them by presidents of life insurance companies who brought out prominently the fact that the statistics of life-insurance companies showed the diminishing mortality lately from alcohol. At another time papers on the legislative and administrative measures to control the effects of spirits brought out many very interesting facts concerning the efforts of different nations of the world to curtail the use and abuse of alcohol.

Some very interesting papers were presented on alcoholism and the native races, and the possible remedies that could be applied nationally.

In the scientific section Prof. Henschen of Stockholm discussed the relation of alcohol and tuberculosis, in which he pointed out their very close relationship and showed that the children of alcoholic parents were very susceptible to tuberculosis. He presented some statistics of 1244 cases in which it was very evident that the two diseases were closely associated and that alcohol in no way was a remedy for tuberculosis. This paper brought out a very interesting discussion and confirmation from many eminent authorities.

In another paper Prof. Laitiner of Finland gave the results of experiments made and studies of 20,000 children from about 7000 families. The object was to show whether the effect of the moderate or excessive use of alcohol could be ascertained in the offspring of drinking parents, and his conclusions were that the effects are very marked, and in many families the alcoholism of the parents was fatal to the longevity of the children and always left them more susceptible to disease.

Dr. La Grain of the Insane Asylum on the Seine, in a paper on insanity following alcoholism, described at great length the form of degeneration and disease which was due to the use of alcohol. He declared it was far more fatal than lead and phosphorus poisoning. He declared that each intoxication was an attack of lunacy and followed by results which were not easily overcome.

Alcohol and the Nervous System

Dr. F. B. Mott, pathologist of the London Asylum and physician to Charing Cross Hospital, read a paper on the effects of alcohol on the nervous system, illustrated by slides. He gave great emphasis to the subtle, unrecognizable changes which follow from the continuous use of spirits. He declared that the direct result of alcohol on the nervous tissue was a deranged biochemical one in which poisons produced by microbes are encouraged to combine and conspire with alcohol, deranging digestion, assimilation and excretion, and starting a vicious circle which not only causes lack of control, but develops a great variety of most complex

Therapeutic Progress

By WILLIAM FRANCIS WAUGH, A. M., M. D., Chicago, Illinois

Dean and Professor of Therapeutics, Bennett Medical College

A SURVEY of the field of therapeutics for the year 1909 does not reveal any startling or even very important advances. The usual number of fads have arisen, the usual sensations have been sprung, and we have run off the straight and narrow path to Truth into the inevitable by-ways and blind leads. "Man is prone to evil as the sparks to fly upward," and this is well exemplified by the course we doctors take in regard to therapeutic innovations.

The rule still stands that real advances are met with instant opposition, whose vehemence stands in direct ratio to their importance. If they go so far as to disturb the foundations of preexistent belief, the opposition becomes intolerant and the innovator who dares penetrate deeply beneath the surface the conventional belief is persecuted. Prometheus still scales the heavens to bring fire down to men, and is chained to the rocks and prey to the harpies as his recompense

The Old Way, and the New

Along the line of drug-therapeutics there has been a steady but quiet advance. The struggle is between the old conception of specific remedies for each disease, and of regulators for disordered vital function; between the set prescription applied as a therapeutic entity, and the special application of single remedies to meet well-defined needs. The old ideal creates a new remedy with every fresh combination of the multitudinous members of the *materia medica*, and thus burdens the mind of the doctor with an unbearable weight. The other teaches him to know thoroughly the powers of each single remedial agent and combine them himself to meet the needs of his patient at the time of his visit. The old method places the doctor under the domination of the manufacturing chemist who urges his latest conglomeration on the doctor as "good for everything under the sun," and by persistent advertising

forces it to the front, crowding out of sight the remedies that have no commercial interests back of them. This necessitates monopoly, for no remedy that is free can possibly pay for its advertising, and those who advertise open remedies spend their money for the benefit of the drug trade rather than for their own.

The old way inevitably led to pessimism, and this to therapeutic nihilism. This was a necessity to clear the ground of a mass of rubbish that prevented any attempt at rebuilding. But pessimism is an unnatural state, and could not long dominate the human mind.

Reaction commences with the study of single remedies. By these we mean those that are indeed single, uniform in their nature and unvarying in their action. No drug that contains several activities, differing in quantity and in powers, is a single remedy or unvarying in action. Chemically pure salicylic acid is a single remedy; but the impure commercial varieties that in one instance permit a dose of 960 grains to be taken without serious injury while 15 grains of another sample may put the taker in peril of his life are not single remedies.

The man who gives every constipated patient compound cathartic pills must give place to him who stimulates peristalsis when deficient, mucous secretion when absent, and does not needlessly irritate the small bowel when the large one is alone at fault, or *vice versa*.

The venom of the rattlesnake, under the name of crotalin, was introduced by Professor Mays, of the Philadelphia Polyclinic, as a remedy for tuberculosis and other conditions. Crotalin is proving a remedy of tremendous power, inducing a reaction like that of tuberculin. It is up to us to learn so to manage and apply it as to utilize this power for our patients' benefit, and thus pluck safety from the jaws of death.

Profound interest has been aroused in the sulphide of calcium by an article in *The Medical Record* giving the experience of Dr. Ussher, an American medical missionary in Syria, in the use of this agent in typhus, variola, scarlatina, and other infectious maladies. Dr. Ussher frankly stated his belief that the use of calcium sulphide came to him as the direct answer to his prayer for help in an emergency. This remedy is well known to the users of active principles; but many who looked on its advocacy as a strictly commercial exploitation have been startled out of their indifference by Dr. Ussher's remarkable statements.

Calcium Sulphide Protects from Smallpox

An epidemic of smallpox, 600 unprotected children in the school, and the nearest supply of vaccine 1000 miles horseback travel distant! Saturation with the sulphide proved protective for the period of exposure, as it did for the other infections above named.

Possibly some of those who ignored this priceless remedy on the flimsy excuse that it, a standard pharmacopeial preparation, absolutely free from secrecy or proprietary monopoly of any sort, was advertised by a house whose only claim was the standard quality of a product that scarcely any other drug house furnished of reliable quality may begin to remember uncomfortably the lives they might have saved had they investigated its merits.

The conquest of pyorrhea alveolaris by Prof. Talbot is another notable event. Dr. Talbot studied this malady not only as a dentist but as a physician and traced its causation to those general conditions which are beyond the ken of the mere dentist, hence had baffled the latter's most earnest investigation. Dr. Talbot traced this local malady to autotoxemia and acidemia and so cleared up the mystery. Nor did he neglect to establish the treatment—he is not the sort of scientist that is satisfied with barren deductions.

The employment of the chemically pure active principles is growing rapidly. Every European army is now equipped with these remedies, the advantages being so obvious

as to admit of no argument; and at last the army and navy of our own country have turned their attention to this matter. When an army surgeon can carry in one pocket-case over 30,000 doses, ready to be used and to exert their remedial powers within one minute, the same remedies in the ancient form requiring a mule team to transport, together with the water and other things necessary for their administration, there is reason enough for investigation.

In civil life the use of these agents steadily increases. This has naturally been most evident among the physicians who dispense medicines rather than prescribe, and the reason is not far to seek.

The man who dispenses knows more of drugs and their quality, has more faith in them and knows better how to apply them, than the one who prescribes and never bothers himself as to what the druggist may supply. Not that the latter is untrustworthy, as a rule, or incompetent; but he is only human, and he is in business. One correspondent told of a druggist in New England who made his tincture of echinacea from the plant he gathered there—although it does not grow east of the Mississippi; but we did not hear of any doctor who detected the error. Nor did any of those more than one hundred who were furnished brickdust on their prescription for aristol so much as suspect the substitution! Truly, as an inspector of drugs caustically remarked, "the persons who pronounce drugs useless probably never made use of 'drugs.'"

The movement to restrict physicians by law from dispensing presupposes an ideal condition of qualifications and opportunities, of absolute equality, on the part of the pharmacists, which must precede any such legal enactment to which the conscientious physician can render obedience.

Progress of the Single-Remedy Therapy

The study of single drugs has been taken up by the surgeons, and we note their application of physostigmine, atropine, pilocarpine, hyoscine, strychnine, quinine, and other alkaloids. In the medical periodicals, too, these remedies seem to be mentioned

degenerations that later are structurally recognized. He declared that to the feeble-minded and to weak, susceptible systems alcohol is a poison even in moderate doses.

Dr. Holitscher of Carlsbad presented an elaborate paper on the diminution of the consumption of wine and spirits in hospital and private practice, and showed that with this there was a tremendous increase in the use of milk and seltzer water, and also with it a decrease in the mortality. He gave the figures of 47 large hospitals of Europe.

In a paper on the treatment of criminal inebriates Prof. Aschafenburg of Cologne discussed the following points. Any quantity of alcohol is injurious even if its effects are transitory and every user of spirits is in danger of becoming a criminal. The greater the heredity and the weakness of the nervous system, the more danger. Legal penalties are insufficient and do not act as deterrents. Persons of that class should be confined to hospitals in which various degrees of restraint can be applied. Where the case is chronic, long periods of detention with parole should be used.

Prof. Rivers of Cambridge, England, in an illustrated paper on the influence of alcohol and other drugs on fatigue, described at great length the complex methods of measuring and testing fatigue-symptoms, and the very elaborate experiments which have been going on for a long time. The results so far have not been very pronounced. It was evident, though, that pure alcohol in many persons produced decided fatigue; in others this was not noticeable. The same was apparent in the capacity and incapacity for work. As experiments were purely laboratory work a long time was necessary to bring out any positive conclusions.

Effects Upon the Brain

Dr. Clouston of Edinburg read a very elaborate paper on the resistive power of the human brain against alcohol, and its limitations. He asserted that there was an enormous power of resistance in the normal and sound brain to the effects of alcohol and drugs, but in others, where the brain was impaired and feeble and the nervous system

defective, there was great danger that this resistance could not be overcome and the person would very readily become an alcoholic or dipsomaniac.

He described the destructive effects of alcohol on the higher cells and the possibility of recovery. Alcohol was the most seductive poison because of its narcotic properties, giving a sensation of comfort and covering up the distressed signals, and was also to many persons a most fascinating drug. It was the unfit, and the debilitated either from inheritance or by neglect of normal living that showed peculiar susceptibility to the narcotism of alcoholism. He urged that the whole subject be treated as a medico-hygienic problem.

Alcohol and Immunity

The Norman Kerr Lecture was delivered by Prof. Laitiner of Helsingfors before an immense audience. The subject was the influence of alcohol on immunity. His experiments were based on studies of 223 persons and a large number of animals. What he sought to ascertain was whether the resistance of human red blood-corpuscles against normal serum or immune serum was diminished by the use of spirits, or whether the bactericidal power of blood-serum was the same in alcohol drinkers or abstainers, or whether the blood was in any way altered by alcohol. The results of his experiments showed that the normal hemolytic power of the blood is less in persons who use spirits, and that the bactericidal power of blood-serum against typhoid and other bacteria was less in a case of drinkers than in abstainers. His final conclusion was that alcohol, even in small doses, exercises a prejudicial effect on the protective mechanism of the human body.

A second paper by Dr. Holitscher of Carlsbad was a study of alcohol as a remedy in pneumonia and enteric fever in 47 different hospitals of Europe. His conclusions were that where alcohol was not used, the mortality was less, and that the nonalcoholic treatment of these cases, all other things being the same, gave the largest promise of success.

Dr. Branthwaite, the inspector of inebriate hospitals of England, described the legislation for inebriates and its practical character. He declared the inebriate a potential criminal, a danger to himself, a terror, scandal and nuisance to his family, and that the State must provide means and measures of protection both to the community and to the patient. The work so far has proven to be very successful.

The Lord Chief Justice of England presided at one of the receptions and made a very strong address on the necessity of studying the alcoholic problem, asserting that, in his experience as a judge, 90 percent of all the crimes of all the country were dependent upon alcohol, and if we could diminish the use of alcohol as a beverage, it would cut down the crime of the country.

Colonel McHardy of Edinburg gave a very startling statistical study of 58,000 cases of crime and drunkenness reported in Scotland during 1907, showing that 84 percent of all arrested were under the influence of spirits when the crime was committed. These statistical tables were startling studies. This paper was followed by a number of others along similar lines, all of which will appear in the volume of transactions, which will soon be published.

Government Representation at the Sessions

The most impressive part of the Congress was the Government recognition and representation at all the sessions. Lords, members of Parliament, leading physicians and prominent officials occupied the platform and took part in the discussions. The Lord Bishop of London gave a reception to the delegates, and numerous dinners and private receptions were given by the universities, the Masonic lodges and diplomats, to special groups of delegates. A number of leading men sat down to breakfast every morning, and while dining together listened to various discussions and speeches on different phases of the subject.

The physicians among the American delegates who took an active part were Drs. Crothers of Hartford, Hughes of St. Louis,

Reid Hunt of Washington, and Surgeon Pleadwell, of the United States Navy.

Numerous excursions about London were given by the Government and others. The daily press reported the proceedings very fully and the Continental papers printed most of the transactions in full.

It was very evident that the subject of alcohol and the various problems and public-health questions which concentrate about its use have assumed a national importance. Apparently no other subject, not even consumption, has so vital an interest to all branches of medicine and reform, and the national recognition of this fact is the beginning of a new epoch in the study of the subject.

It was pleasing to note that the studies of Americans were recognized as the most advanced of any country in the world, and while a formal invitation was given to hold the next congress in America, the Queen of Holland, who sent a special invitation to meet at the Hague in 1911, was accepted.

Miss C. F. Stoddard of Boston, the head of the Scientific Federation Bureau, was given a very leading position on the program because of her association with Mrs. Mary Hunt in securing laws, in every state of the Union, requiring that the dangers of alcohol should be taught as a hygienic topic. This brought out a very strong array of figures and discussions from eminent physicians on the value of teaching the dangers of alcohol in the common schools. This was one of the subjects that attracted unusual attention.

Reports of the Daily Press

The daily press gave a very large space to the proceedings and made frequent comments on some of the very startling facts. The medical press later gave a brief summary of each paper, followed by conservative comments, all recognizing the fact that this was the beginning of a new era in the alcoholic problem which was destined to occupy a very large place in the public's mind.

The dominant idea brought out was that alcohol is a depressant and narcotic, and

should never be considered a stimulant or tonic, and that as a beverage it has no place whatever. Many of the papers brought out a great variety of facts showing the degenerations from the use of alcohol both from laboratory and clinical experience.

The Gift of Wine at Budapest

It is interesting to note in this connection an incident which took place at the International Medical Congress held at Budapest last month. Each member of the Congress received two bottles of Tokay wine with the compliments, apparently, of the Hungarian Minister of Agriculture. In reality it came from the Hungarian Wine Growers' Association and had a certificate from the Minister that the product was pure. Accompanying this present was a very attractive booklet giving great prominence to the value of this wine and calling the doctors' attention to its medicinal power in disease.

A circular letter protesting against this was issued, signed by Sir Victor Horsley of England, as president, and more than fifty leading English and Continental physicians, denying that alcohol had any value and considering it an insult to be advised concerning the value of spirits or wines in any form. This letter urged members not to accept this present, and thus become a party to an iniquitous delusion which every scientific study and clinical experience had flatly contradicted. This created a great stir, and the wine dealers tried to take

advantage of it for advertising purposes by a canvass among the leading physicians to secure their endorsement. To their great astonishment nearly every leading man refused to be interviewed or to commit himself to the endorsement of wine as a medicine. The incident created quite a ripple in some circles, but was unmistakable evidence that the doctor has taken up the alcohol problem and will soon be recognized as a teacher and leader.

Another incident occurred some months ago which is equally significant. The American Society for the Study of Alcohol and Other Narcotics held a meeting in Washington, D. C., at which 21 papers were read. The character of these papers, and the interest which they excited, attracted the attention of Congress and a resolution was passed making these papers a public document and publishing 5000 copies for free distribution. This is called Senate Document No. 48, and copies can be had through the senators and members of Congress by addressing them. There was something very significant in this last incident, that the alcoholic question should be considered of such vital importance beyond any other reform movement of the day, and that the papers should be of so much importance.

The significance of all this is, that the alcoholic problem is rapidly becoming one of the great topics of the age, and that medical men will be forced to take it up and become leaders and teachers where they are only followers now.

The Influence of Burggraave on Modern Therapeutics

By W. T. THACKERAY, M. D., Chicago, Illinois

SOMEWHAT more than sixty years ago, a great idea came to a teacher in the University of Ghent. This physician had surveyed the field of therapeutics and found it unsatisfactory. There was a multitude of drugs, but only a few remedies. Men knew in a general way some of the leading actions

to be commonly expected of a drug if of good quality and rightly administered, but there was no certainty as to the quality or the quantity of the effects that would follow, because the drugs were themselves uncertain and variable. The best anybody could do was to make a guess at what probably would

happen, and sometimes the guess came pretty nearly true. From this it inevitably followed that practitioners sought to lessen the uncertainty by combining as many of the drugs that might possibly prove useful and giving them together, and so there were devised phenomenal compositions, such as for instance Warburg's tincture, in which to administer practically an entire pharmacopeial array in one single dose.

At that time a few plant alkaloids had been discovered, but they had scarcely begun to come into practical use, being looked upon as chemical curiosities. Volumes upon volumes had been composed on the properties and effects of the sundry drugs of the *materia medica*, controversy and contradiction without end had been occasioned by the variability of the drugs, and so those who attacked and those who defended alike resented a movement that would render their work obsolete.

The Mystic Element in Man

There is a curious dislike on the part of all men to give up the pleasant realms of the unknown, the mysterious, and the supernatural in which the imagination may give itself free play. The hard facts of science are unattractive and restrain the dreamer unpleasantly. These cold, dead drugs which we know all about, which always do the one thing and nothing more, leave too little opportunity for that individuality that every human being craves. Materialism, fact devoid of the habiliments of fancy can never be popular. One superstitious belief is no sooner shattered than another takes its place. We acknowledge that Jove does not rule Olympus, nor Poseidon the sea or Pluto the depths—but we worship Mithras. And even though we may have our doubts as to the vote of the Senate being competent to really deify Divus Caligula, we keep our views to ourselves, for the multitude prefers Belief to Negation. But we are wandering far afield.

Burggraeve saw the immense practical superiority of morphine over opium, of quinine over cinchona, of strychnine over nux vomica. He saw that we could admin-

ister the pure alkaloids with confidence because we knew just what they would do; that the students of experimental therapeutics were being driven to their use in order to obtain conclusions uniform enough to have value; and he did not see why after extracting the pure, clean alkaloids for experiment one should dump them back among the useless dirt for clinical use simply because physicians had been accustomed to the crudities and found it awkward to change.

Preservation of the Alkaloids

Investigating further, the great Belgian found that the pure alkaloids, preserved in milk-sugar, kept indefinitely without decomposition; they were easily taken and occasioned little or no disturbance of the stomach; they were quickly dissolved and absorbed, saving precious time in getting to work; and above all, the precision of their known powers inspired the user with such confidence in his own ability that he was emboldened to intervene promptly, powerfully and effectively, even in the early forming stages of maladies, when they were as yet plastic and within the control of remedies.

Professor Burggraeve saw no reason why similar advantages should not be secured from every member of the vegetable *materia medica*, by discarding the useless dirt that encumbered the really valuable element and employing this alone.

To a certain extent this has been realized. In all probability it is due to the impetus originating in Burggraeve's movement that so many alkaloids and other active principles have since been isolated. But in this respect chemicopharmacy has run far ahead of the clinician. Comparatively few of the hundreds of active principles recognized have found their way into general use. Those great storehouses of keen-edged, finely differentiated weapons, opium with its 28 distinct active principles, cinchona with 30, chelidonium with 17, have scarcely been touched.

As it is, we content ourselves with morphine as an anodyne, and only of late years has the superiority of codeine as a vagus-

sedative, narcotine as an antimalarial, and one of its derivatives as a styptic, been utilized. So also we employ quinine, and to some extent (too often unwittingly!) cinchonine and cinchonidine. Of the rest we have actually not even a smattering of knowledge. So, also, we are content to utilize strychnine as fulfilling all the uses of its class, totally neglecting brucine, thebaine, codamine, calabarine, gelseminine, curarine, and all the rest; although it seems reasonable to infer that among such a group of related remedies there may be individual differences corresponding to similar variations in the clinical pictures presented by patients.

How the Idea Spread

In the practical application of his principle Burggraeve accomplished much in person; but his labors have led to a remarkable florescence in many lands. Van Renterghem in Belgium, Laura in Italy, Castro in Spain, a whole host of brilliant minds in France, and others in every civilized land, have applied and extended the alkaloidal principle until it is a living vital force, a ferment the effects of which are everywhere manifest.

Many attempts were made to naturalize the method in America, but singularly enough, the conservative sentiment proved more stubborn here than in any country of Continental Europe. It was only after repeated efforts with partial and temporary success, that the exotic at last took root and became established.

Dr. W. C. Abbott proved to possess the happy combination of professional acumen to realize the enormous advantages offered by the method of Burggraeve beside the business ability to establish a supply-house on a sound financial basis. This latter accomplishment has been a truly Herculean task, especially since the growing popularity of the alkaloids began to be felt by the manufacturers of the older forms of medicine.

At present more than 50,000 American physicians are employing the alkaloidal methods to a greater or less extent. I say the "alkaloidal methods" advisedly, for the use of alkaloids as remedies did not begin with Burggraeve, nor do all who now employ

these remedies avail themselves of the inestimable advantages of his methods. But it was Burggraeve who first appreciated the possibilities afforded by the systematic employment of these remedies, and announced these to the profession.

He who looks upon the alkaloids simply as a somewhat better line of drug-remedies has not as yet penetrated the outer circle. In truth, the realization of the change in himself, in his ways of looking on disease and the enormous increase in the efficacy of his means of coping with it, usually comes upon the physician a long time after he has begun to walk this path. It often comes upon him as somewhat of a shock that he has so completely altered the point from which he views his own duties. His patients are much more likely to have noted the change—his increase of self-confidence, the certainty with which he prescribes and with which the expected results follow; the tremendous efficacy of his remedies by which acute maladies frequently are dissipated while yet in the forming stage while chronic ailments present a gradual but steady approximation toward healthy conditions, very different from the ups and downs, the improvement and set-backs characteristic of the older methods.

This is no fancy sketch. It is one, however, that will seem such to those who have not gone the route. It is not too much to assert that he who is fully indoctrinated and practised in the applications of the active principles occupies a different plane from other men and this can be appreciated only by those who follow up the matter to his point.

Burggraeve Rejuvenated Drug-Therapeutics]

In conclusion I will say that to Adolph Burggraeve, Emeritus Professor in the University of Ghent, is due the honor of having first established therapeutics on a strictly scientific basis, reduced to order the chaos of the materia medica, taught the physician to intervene effectively during the formation period of disease, and rescued drug-therapeutics from the grave toward which the ineffectiveness of its preparations had brought it.

In strict accord with his work, the movement of Burggraeve has been absolutely free from commercialism, inasmuch as the material with which it works is neither secret, proprietary nor protected by any species of monopolistic control. While supply-houses that furnish these active principles of standard, that is of unvarying quality, are absolutely necessary in view of the variable strength of the alkaloids as found in the market, there is no proprietary control exerted over these agents, nor has any single supply-house any advantage over others beyond what accrues to it from the well-earned confidence of the profession in the uniform quality of its products. We are hardly in a position to say that such a reputation is undesirable or reprehensible; and yet this unsubstantial reproach has been the only objection as yet brought against the Bruggraeve movement.

One word as to the convenience of the dosimetric, or alkaloidal, method in actual practice. Under the old style it was next to impossible for the doctor, and especially the doctor practising in a sparsely settled neighborhood, to carry with him a sufficient supply of medicines for his work unless he could travel in a wheeled conveyance. The saddle-bags and packs were always bulky and inconvenient. However with the method under consideration it is possible to carry an almost complete pharmacy without attracting undue attention and also without inconvenience.

To the military surgeon alkalometry should appeal with even greater force—the compactness of the granules as well as their keeping qualities and their effectiveness particularly must recommend them. I am not conversant with the field-case or the detached service-case, as used outside of my own country, but our medicine-case consists of a crate 15x18x36 inches and this contains two boxes, each weighing when filled 50 pounds. This case contains a moderate supply of medicines and dressings designed for a regiment. But I can show you that upon my own person I can carry a larger and more varied supply of drugs than is carried in the army-case referred to, and I doubt if any army surgeon could notice this in my tight-fitting uniform.

There are in my four cases 9600 doses of absolutely effective remedies for active emergency use by the surgeon, so that the field-case may be left to carry a larger supply of the more bulky dressings and instruments. In addition, I can carry with me a hypodermic case containing the new hypodermic anesthetic, hyoscine, morphine and cactin, with which from the supply in hand I can relieve the pain and shock of desperately injured men and place them in condition for operation as opportunity and convenience offers.

I close by voicing the hope that every one of [my readers] will become an enthusiastic and consistent alkalometrist.

A New Year's Resolution for the Profession

By C. E. MEIXSELL, M. D.

RESOLVED.—That I love my profession and will try to master it; love my enemies and try to overcome them; love all mankind and seek to be loved; love virtue above passion, moderation above excess, health above wealth, and God above all.

RESOLVED.—That I try to be glad of life, because it gives chances to love, work and play; to be satisfied with my possessions but not content with self until I have made the best of them; to despise nothing worldly except falsehood and meanness; to fear nothing except cowardice; to be governed by my admirations rather than by my disgusts; to covet nothing of my neighbor's except his kindness of heart and gentleness of manners; to think seldom of mine enemies, often of my friends, and each day of Christ Jesus.

A Pharmacodynamic Study of Morphine

*Morphine Can Save Life! Its Employment in Organic Diseases
of the Heart*

By ROBERT TISSOT, M. D., Chaux de Fonds, Switzerland

Collaborator on "Folia Haematologica" and on the "Journal de
Dosimetrie et d'Alkaloidotherapie"

II

MORPHINE capable of saving life! This is an affirmation which will meet with much incredulity, and yet, experience, that single source of truth, as Poincaré has written, shows us that this proposition is a true one. As we have seen, morphine is a tonic because it favors the formation of biogenic molecules and calms the too violent reaction of the organism from the irritations which may come to assail it. It acts in these cases like chloroform; it is capable of cutting short uremic convulsions and the paroxysmal edema due to nephritis or renal sclerosis.

The following observation is instructive. A man, age 63 years, suffering from emphysema and a feeble heart, was suddenly attacked with grave pulmonary edema which, considering the severe cardiac weakness, threatened the sudden termination of his life. The patient had conserved all of his mental clearness; the dyspnea tormented him terribly. It was for this reason that he had been given an injection of morphine, as desired by himself and his friends, the latter having previously been informed of the possibility of a fatal termination. The dose given was 1-5 of a grain, and the effect was a most happy one. The dyspnea ceased almost instantly, the expectoration of viscous and frothy masses was arrested, and the patient passed into a peaceful sleep lasting several hours, which comforted him greatly. Some days later he got up, and appeared to have overcome his attacks; six weeks later, however, there occurred a nervous paroxysm which ended in death before the physician arrived.

Observe the situation: If the excellent effect (at least from the symptomatic point of view) of the first dose of morphine had

not been known and the injection had been made during the second attack, the morphine would have been charged with having caused his death! The list of harmful injections would have been augmented by one more case—quite erroneously, it is clear, since the first attack passed away in spite of the injection, or, better, because of it. This observation shows also that it is not proper to attribute the troubles of the patient to his remedies, as the patient and his friends constantly assert, and that it would be infinitely more just to see in the happenings of the case the effect of the disease and its organic reactions.

Rosenbach recommends morphine in the treatment of diseases of the heart, since its effects are in many respects similar to those of digitalis. Properly employed these two agents are tonics, but they are so for different reasons. Digitalis augments the mechanical work of the heart. Morphine, on the other hand, diminishes the activity of the organs, lowers the excitability of the central nervous system, the psychic centers in particular, as also that of all the tissues. Morphine diminishes intraorganic activity; the nerve-centers having become less sensitive no longer respond to the sensations of pain produced by the vital acts rendered difficult by the disease. The dyspnea, the precordial cough, palpitation, and radiating neuralgias disappear at once under the effect of the narcotic. The muscular agitation, the gasping respiration and psychic depression disappear also. Through the influence of morphine the organism is reduced to the minimum of vital functioning; it no longer keeps count of the bad condition in which it is found. During this period of calm it again reassembles the energies capable of reestablishing the vital tone, and this tone permits all the organs to

work together in harmony, which is to say, normally.

Morphine, therefore, is an economizing remedy. In small doses it stimulates the protoplasm. The combination of digitalis and morphine fulfils two indications: it places the body at rest and increases the tonus, gives fresh energy. When digitalis no longer acts, morphine is indicated because of the economy of the vital forces it effects.

In angina pectoris the suffering depresses the spirit and weakens the body because it makes too large a requisition upon the muscular force that must overcome the dyspnea. In this condition the organism loses its strength while acquiring no fresh strength because of the lack of sleep. In these cases morphine clearly is indicated, but it is necessary to employ it in small and prudent doses (1-13 to 1-6 grain). This mode of treatment is far superior to injections of camphorated oil or ether, which not only are painful but the effects, of which, according to Rosenbach, are uncertain.

Morphine is indicated at the beginning of failing compensation of the heart, especially in excitable patients, since this alkaloid is capable of relieving for some days, and even for weeks, the so-called cardiopathies. Morphine is also indicated when there is palpitation, the sensation of constriction, the result of bodily effort and psychic emotions. It is proper to give it also to patients who cannot sleep because of precordial pain, palpitation, pulsation in the vessels of the head and noises in the blood-vessels. In these cases small doses of morphine given occasionally have a very good effect. This effect is more lasting than that of bromine or other nervines; but in these cases, in order to avoid habit formation, it is necessary to give the remedy only at very long intervals (three to five days),

to restrict it exactly to the needs of the patient, and to proceed according to the progress of the disease and the symptoms which it presents.

In nervous cardiac patients the effects of small or medium doses of morphine (1-13 to 1-6 grain) are often marvelous and aid greatly in the psychotherapeutic treatment. The same is true in patients suffering from general nervousness and in cases of neurasthenia when not too severe. This advice may appear singular because these nervous individuals contribute the principal contingent to the victims of morphinomania.

However, this fact should not frighten us, since the danger may be cut short very easily: *All that is necessary is that the physician himself give to the patient the proper dose, and this dose only.* In this way the control of the patient will always be absolutely in his hands. The dosimetric granules lend themselves admirably to



DR. ROBERT TISSOT

this method of dispensing by the physician. Subcutaneous injections should not be made except as a last resort when the insomnia has lasted too long. For example:

Let us notice here that it is necessary to distinguish three categories of nervous individuals:

1. Those whom their faculties render incapable of doing the work which is imposed upon them; also the discontented—those who are placed in conditions not suitable to them.

2. Individuals of weak will-power, who are easily curable provided they are unceasingly spurred on and recalled to their duties.

3. The fatigued, whom physical or moral influences have made the victims of the conditions of family or social life. These patients only need rest and change of environment. Under such a condition and under

this condition alone they become capable of continuing their occupations and retaining their position in society.

Of course, all the gradations among these three forms are encountered. In the three cases enumerated, however, the treatment is indicated by the etiology and is either psychic or somatic. Still, it is suited only to adults and should constitute merely an adjuvant to other therapeutic means.

Morphine Useful in Excited States

In these cases of abnormal excitation morphine given in doses of 1-13 to 1-6 grain has an extraordinary action on subjective palpitation of the heart, on the sensation of agony, vertigo, on the insomnia and psychic depression. Its action is decidedly superior to that of the bromides. Morphine, while causing these symptoms to disappear simultaneously with the hyperesthesia and hypochondria, leaves the patient in a state of euphoria which greatly aids in the cure.

This sense of euphoria makes one believe a complete cure has been effected. However, one should not be deceived in this, lest the patient should fall into the morphine-habit. Let us see. Believing himself cured and returning to his occupation, the unfortunate victim will experience anew all his former troubles—the pains, the cardiac palpitations, the disagreeable sensations in the muscles and skin, and so on. It becomes necessary again to give him doses of morphine to restore the euphoria. This, eventually, may result in a vicious circle, since the morphine ought not to be, in this treatment, a calmative but rather a tonic, aiding the other tonics, which are rest and psychic treatment. The need of renewing the dosage of morphine is hardly felt when the patient keeps in bed. This we should always bear in mind.

In true neurasthenia the subcutaneous injections made at judicious intervals give excellent results, provided the physician is firm and does not allow himself to be moved by the patient. Neurasthenic patients experience a great number of disagreeable sensations accompanying all their actions. Morphine removes a number of these, but the patient should be taught to bear these

evils, at the same time showing him that this is for his own good.

[It may here be mentioned that there is found to exist some analogy with the action of digitalis in cardiac patients. When the latter remedy has overcome the troubles of compensation the patient considers himself cured and demands more of his heart than it can give. That is why it is necessary to make these patients understand that the equilibrium, when established, may very easily be destroyed on their part and that they ought to do everything possible to prevent this. For that reason they should avoid excesses of every kind so that the heart may have to do but a minimum of work. To summarize, these patients ought to be treated like perpetual convalescents.]

Morphinism has spread greatly in recent times. This, however, is no reason for giving up the morphine. It is far better to know the causes of the abuse in order that we may avoid them. These causes have already been described.

After great physical exertion the patient experiences muscular pains, chills, loss of appetite, and insomnia. In these cases 1-13 to 1-6 grain of morphine gives rest to the fatigued and irritated body. As experiences often show, persons with an irritated stomach often prefer to go without eating rather than to suffer after meals. At the same time, those who go to the table fatigued and hungry often suffer, during digestion, from burning, regurgitation, flatulence and colic. In these cases small doses of morphine, 1-13 of a grain, will cause the disappearance of these phenomena and check too violent reaction on the part of the stomach. Some patients go to sleep easily but awake at the end of one or two hours of sleep. In these cases it is necessary to employ only a small dose of morphine, 1-13 of a grain, and to give another dose at the end of the two hours so that the patient may have six to eight hours of the necessary sleep.

Morphine in Febrile Diseases

Why is not morphine given at the present time, in suitable doses, in febrile cases when everything absolutely indicates it? Its ex-

clusion seems, at first sight, to be incomprehensible. It is due to the fact that the older practice considered fever and all of its forms as being of asthenic origin. This conception necessarily led to the combatting of fever with stimulants, alcohol especially, and the albumins. In these later days this method of looking at fever has lost ground. However, morphine is not always employed in febrile conditions because it is understood that the heart is always menaced in these conditions and because it is also understood that morphine paralyzes the heart.

Morphine in Typhoid Fever

The harmfulness of morphine in typhoid fever is an intangible medical dogma. It was on this point that Rossbach determined, although with trepidation, to give morphine to an agitated patient whom delirium and jactitation had brought to the end of his strength and who had not slept for several days. The result was strikingly happy. The heart was not weakened but, on the contrary, the reparative sleep gave to it new strength as well as to the entire organism. Delirium and the agitation had cost the patient an enormous amount of wasted energy.

To arrest such sources of loss is plainly excellent therapy. The nervous system exercises a very great influence on the production of heat and on its regulation. It is also marvelous to see the tonic action of morphine upon patients in the midst of a chill or an attack of dyspnea and febrile pain. To these morphine gives new strength, so that one can comprehend readily, after seeing it, the classic exclamation of that great clinician: "*Me Hercule, opium non sedat.*"

Summarizing, morphine is indicated in febrile conditions with irritability of the muscular and nervous systems. It should be employed also in cases in which cerebral irritation causes hyperpyrexia. It is also indicated when they are nervous. It is known that in these patients the fever is lit up more easily than among those of a phlegmatic character. The problem for the therapist is to determine whether the nervousness is the cause of the hyperpyrexia or if the latter is the cause of the accompanying nervous-

ness. For this reason it is necessary to look after the antecedents of the patient.

Morphine acts quite differently from the usual antipyretics, the latter fixing the excess of body-heat while the morphine acts directly upon the heat-regulating centers, which it calms efficaciously. It will be logical to associate morphine with the antipyretics in order to fulfil two indications. It acts synergistically for the good of the patient. The excess of the febrile reaction brings about weakness, and this weakness interferes with the salutary reactions of the organism. In regard to the morbid causes, such are the acceleration of the combustion of toxins by the acceleration of circulating blood, the hematosiis, the leukocytosis, the urinary purification, the disintoxication of the entire organism by the liver, the thyroid and the hypophysis.

There is an analogy between this severe febrile reaction and the cough and nervous vomiting. These conditions, which may have an entirely local cause, sometimes persist for a long time, entirely without reason, even after the first cause has long since disappeared. It is absolutely rational then to control them with morphine. By reestablishing a condition of calm, the patient is relieved from useless suffering and unnecessary expenditure of energy. We should also bear in mind in delicate problems like these that medicine should be given *summa cum prudentia*, that is to say, dosimetrically. Let us now examine the treatment of the morphine-habit.

Morphinomania

Morphinomania, or morphinism, is shown by physical, or somatic, symptoms. These are myosis, vascular contraction, muscular weakness and trembling, diminished sexual potency, amenorrhea, and atrophy and dystrophy of the nails, the teeth and the hirsute system. On the part of the brain one notes suffering physically, hallucinations, somnolence, intelligence and memory diminished. The moral sentiments become less acute. The patient commits robberies, is guilty of misdeeds, or he experiences psychic degeneracy. This condition renders worth-

less even the most beautifully intelligent mind. This is why it is necessary to remove the poison from the morphinomaniac as quickly as possible, before it can cause serious trouble. But how should it be taken away from him?

The Withdrawal Symptoms

To reply to this question it is necessary to pass in review these symptoms: These are yawning, repeated sneezing, watering of the eyes and an increase of the nasal and bronchial secretions. The voice becomes raucous. The pupils become dilated, while the pulse shows that the vascular tone is lowered. The extremities become cold, the head, on the contrary, being hot. At short intervals an opposite condition is produced, namely, the skin becomes damp, paresthesias are observed all over the body, besides cephalalgia, hemicrania, neuralgia and pain in the calves and the knees. Ocular accommodation is greatly impaired. The digestive troubles are multiplied, there being eructations, vomiting, loss of appetite, borborygmus, gastralgia, and pains in the lower abdomen and the rectum. Spasm of the urinary bladder and the gall-bladder are not uncommon. Amenorrhea gives place to painful dysmenorrhea with painful hemorrhages. The sexual impulse is aroused and becomes intense. In a man this excitation is marked by strong erections and pollutions. Generalized or local trembling, gastralgia, staggering gait, asthma, the re-appearance of the neuralgias, denutrition, sometimes causing collapse and cardiac paralysis—this is the list. None of these symptoms appear except when abstinence is too abrupt. When the reduction of the doses is poorly graduated, collapse is shown by paleness, weakness, easy compressibility of the pulse, and pallor of the face.

Symptoms pointing to the encephalon, are agitation and excitement. The patient never is at rest, sitting or lying down. He runs here and there, sighs and always demands something else. The patient thinks he has insomnia and frantically demands his favorite poison. These people are very capricious, discontented and disagreeable. The women often shows signs of hysterical stigmata and

the men present something like it. They are given to strange exaggerations, they experience convulsive or spasmodic attacks of hyperesthesia, hyperalgia, muscular contractions, transitory delirium; visual hallucinations are not uncommon. There also is observed the mania of delirium, quite comparable to the delirium tremens of alcoholism. This delirium is accompanied by trembling, difficult speech, diplopia, hallucinations of all the senses, agony, furious mania necessitating the isolation of the patient. This delirium may be accompanied by albuminuria, and by debilitating the heart the life of the patient may be placed in danger.

Therapy of Demorphinization

The therapy of the demorphinization cure suggests itself by a consideration all the facts involved. It should first be recalled that this cure should not be undertaken if the patient is troubled with a feeble heart or is affected by some acute or febrile disease. In the latter cases, particularly pleurisy and pneumonia, we should give to the patient the ordinary dose of morphine. If in the course of treatment of the morphine-habit the patient is seized by one of these diseases it is necessary to turn backward and give the primary doses, or even larger doses than these when the heart becomes weak.

Another point on which it is necessary to keep count is this: The incurables, those disturbed by pain and insomnia, the asthmatics, those suffering greatly from headache, those affected with cholelithiasis, the alcoholics who suffer from tremors, mania or delirium, those nervous from nicotine poisoning, the cocainomaniacs, very old victims of the morphine-habit, all these should not be deprived of morphine.

In all the other cases the patient should be placed in an asylum, since it is well nigh impossible to cure the morphine-habitué while with his friends and at his occupation. This it is not necessary to discuss.

There are several methods of demorphinizing the patient:

1. Gradual withdrawal of morphine. This is the oldest method. The primary

dose is gradually lessened. The diminution of this dose is regulated by the symptoms or the accidents of abstinence.

2. The abrupt method. From the first the patient is given no morphine whatever. He is abruptly deprived of this poison. This method is followed by the appearance of the violent phenomena of abstinence. It is no longer generally employed.

[The Rapid Method Best

3. Rapid demorphinizing. This cure lasts from five to ten days, according to the daily dose to which the patient was accustomed. Demorphinization is effected in about four days for doses of 3 to 5 grains, and in about ten days for doses two or three times as large. This method of treatment is never followed by collapse or grave disturbances of circulation. On the other hand, the other phenomena of abstinence may become very acute, but are only transitory. It is a matter of testing to determine at what rate the daily dose may be reduced. For this reason it is very necessary to discover the dose necessary for the patient, to avoid collapse; but this is not so easy because the patient often deliberately deceives the physician in order to render his abstaining less painful; hence he is likely to name a much larger habitual dose than he has been accustomed to.

The daily dose should be given in four parts, the last one at the moment of retiring, in order to produce sleep, if possible. The other doses should be given before the meals, which should be generous. Alcohol in any form is absolutely forbidden. Exceptions may be made only in apathetic patients. These usually are women who remain in bed without eating, drinking or sleeping. These patients have not, ordinarily, been accustomed to drinking alcohol or other fermented drinks. In patients of this class small quantities of good wine incite appetite, regulate digestion, and bring back sleep. Nutrition is improved and strength returns.

Here, then, as in all therapy, it is not wise to be too exclusive nor to "schematize," but better to individualize. Every cure is based on the state of the patient, whom one

should consider in cold blood, weighing not only every symptom but the entire symptom-complex, that is, the general condition.

The physician should awaken to the necessity of exercising over the morphine victim a great moral authority. He should speak to him with mildness and patience, but without weakness. In the later stages of the cure suggestion may act so well that an injection of a physiologic salt solution may act precisely as a good dose of morphine.

4. The method of substitution. This consists in gradually replacing the morphine by codeine, cocaine or chloral. To replace one bad thing by another bad thing is too dangerous for us to spend time on.

The Use of Alkalis

5. The chemical method. In whatever manner introduced, morphine always is eliminated a large part by the intestinal mucosa, and from this arise the gastric phenomena that are so often observed in the course of the treatment of the morphine-habit when not conducted on dosimetric lines. The presence of morphine on the gastric mucosa during digestion interferes with the normal secretion by this organ. Morphine-habités are dyspeptics precisely because of this fact. When we demorphinize them, the mucosa, freed from its poison, begins to secrete freely. It resumes energetically its interrupted activity. The acidity is replaced by hyperacidity, and this hyperacidity is partly the cause of the disturbing phenomena that are observed in the course of demorphinization. At least this is a theory proposed by Hitzig, in 1892. This theory contains much truth, as shown by the fact that when sodium bicarbonate is administered in sufficient quantity the patient bears his abstinence from morphine much better. The daily dose of sodium bicarbonate should be from 100 to 200 grains. The dietetic regimen should be that of hyperchlohydria. This method should always be combined with that of rapid demorphinization.

6. Hypnotic suggestion. This method of substitution through the action of the will of another on the will of the patient has been

successful in isolated instances in patients who were very suggestible, but, frankly, it should not be considered.

Let us now examine the symptomatic treatment of the various phenomena of abstinence.

Yawning and the coryza do not require special treatment. The feeling of cold and chills should be overcome by the heat of the bed thoroughly warmed. Gastric troubles should be relieved by sodium bicarbonate, as we have already seen. The diet for hyperchlorhydria and forbidding of sweets is in order. In severe cases one should give hyoscyamine in combination with strychnine in order to control the glandular secretions. Gastric pains will be greatly relieved by hot applications over the epigastrium (linseed poultices). Diarrhea, when not too profuse, should not be interfered with inasmuch as it carries out of the body part of the poison we are fighting. Vomiting may be controlled with iced champagne.

Nervousness may be relieved by prolonged hot baths, the same as in insomnia. Cardiac weakness is efficaciously met with subcutaneous injections of camphorated oil, caffeine, and especially digitalin. Neuralgia may be treated with quinine and the application of the tincture of iodine. Attacks of hepatic colic require a return to the morphine injections. Antipyrin is of value in menstrual colic. Profuse hemorrhages call for ergot and stypticin. Delirium can only be controlled by morphine injections. Collapse can be met with injections of camphor, ether, caffeine, strychnine, champagne; also by mustard over the precordial region.

After effecting a cure, we must not forget that the former morphine-slaves are subject to relapse. Ordinarily these individuals have feeble will-power, and so it is necessary to watch them and keep them thoroughly employed. Alcohol and tobacco, which tend to debilitate the individual, should be forbidden.

Cicutine, The Alkaloid of Conium

A Brief Review of the Physiologic Action and Therapeutic Possibilities of a Very Useful Remedy

By H. H. REDFIELD, M. D., Chicago, Illinois

Professor of Therapeutics in the Illinois Medical College

CICUTINE, or as it is sometimes called, coniine, is a liquid volatile alkaloid derived from conium maculatum. This plant also contains methyl-coniine, conhydrine, and coniic acid.

The principal action of cicutine is as a paralyzer of the motor nerves. Its action is at first manifested on the end-organs, from whence it extends upward, eventually involving the nerve-trunks, and lastly the centers themselves.

Methyl-coniine has the same action as cicutine, as regards the paralyzing effect upon the motor nerves, but its action differs from that of cicutine in the respect that, while the action of cicutine begins at the periphery, that of methyl-coniine is initiated at the centers, thence to the nerve-trunks, and finally to the end-organs. Thus by affecting the

centers in the cord first, methyl-coniine causes a paralysis of reflex action. Regarding conium maculatum Potter says: "As the actions of coniine and methyl-coniine vary considerably, and as the relative quantity of each alkaloid in the plant also varies, the results obtained from samples of conium differ in a marked degree, and are often contradictory to each other."

The use of the alkaloid cicutine, however, precludes any possibility of this contradictory action, so liable to occur when the tincture or the fluid extract is used.

In toxic doses cicutine produces numbness, weakness, especially of the legs and feet, diplopia, dilated pupils, labored breathing, dizziness, impairment of speech, and finally death, due to paralysis of the muscles of respiration. The heart is not affected

until carbon-dioxide narcosis occurs, and the mind remains clear, but is torpid. On account of its greater solubility the hydrobromide is the form usually employed.

Indications

Diseases of old men and old maids, in persons of light hair, who become excited very easily; those of rigid fibers.

Cicutine should be studied in indurations of the glandular structures of the body, when the glands involved are of stony hardness, especially when a history of traumatism is obtainable.

Congestions, engorgements, or tumors of the female breast, which may appear only during the menstrual period, are some of the conditions calling for cicutine.

The effects of overindulgence in sexual intercourse, as well as of the other extreme—celibacy, when the patient is shy, timid, retiring, blushes easily, is confused, mind depressed, shuns the company of his fellows, and has a special aversion for the society of the opposite sex, yet dreads being left alone—are fully met by cicutine.

Its depressing action on the motor system, makes it an ideal remedy in cases of chorea.

It should be remembered in whooping-cough as well as in other spasmodic affections, when its antispasmodic action is needed.

To quiet the motor excitement and prevent exhaustion, in acute mania, cicutine is a most effective remedy.

In tracheobronchial catarrh, with a spasmodic cough, which is produced by a sensation of itching or a dry spot in the throat or chest, the cough made worse by the recumbent position, and is therefore especially troublesome at night when the patient is in bed, cicutine will quiet the spasm of coughing and allow the patient to secure the much-needed sleep, which is far preferable to giving a narcotic, which, while it secures sleep, does not materially affect the cause of the

trouble, the next night finding the sufferer no better off than before.

Its action as a sedative in tetanus is prompt and satisfactory.

Cicutine gives most excellent results in blepharospasm.

Landry's paralysis has been benefited by this remedy, and it is especially indicated



DR. H. H. REDFIELD

in paresis, and paralysis which begins at the extremities and extends upward.

It can be given in epilepsy, hysteria, and other convulsive or explosive disorders, without the slightest fear of producing a drug-habit.

It is the remedy of choice in vertigo when the patient is unable to turn the head sideways.

Tannic acid is the best antidote. Nuxvomica or its alkaloids, strychnine and brucine, or any other tetanizers are antagonists.

Children as a rule bear cicutine better than do adults.

Rational Therapeutics

Some of the Things that Help Thereto

By F. A. WALTERS, M. D., Stevens Point, Wisconsin

Former President of the Wisconsin State Homeopathic Medical Society

EVER since medicine emerged from the mysticism of the dark ages there are records of certain physicians who were "geniuses"—genius being nothing more than a capacity or aptitude for hard work—who enthusiastically experimented and advanced along certain lines. From an enthusiast it is only a step to what is popularly termed a "crank," but as it takes the latter to make the world move, unless these men have been such, medicine would not have progressed as it has. One of the troubles with an enthusiast or crank is, he is apt to be so absorbed in his own particular line they can see but little good in others. Contemporaneous with these men were others who could see nothing good but in what their forefathers had used and were ready to belittle the work of those who advanced new ideas. Happily there were others who, though not geniuses, were progressive, and testing all things held fast to that which was good and did fully as much for advancement as the geniuses.

Of course all this applies no more to medicine than to all these lines. That many of the ideas advanced by these early workers were wrong is now well known, but had they had the advantages of later-day knowledge, it is safe to say they would have been the first to discover these mistakes and, so, all honor to each in their day and special line.

The Germ-Theory and Its Contribution to Therapy

One of the greatest boons to mankind was the "germ-theory," evolved and proven, which led to the "serum-therapy" both for preventive and curative measures. Then, from the fact that autointoxication from the alimentary tract was as patent as infection of the puerperal uterus or open wound, came the motto of "clean out, clean up and keep clean," and preventive medicine was re-

duced to a science. Then, with "alkaloidal therapeutics" added to this, medicine, as a whole, was reduced to pretty near an exact science. Thus all honor to the alkaloidal geniuses.

Called to a patient suffering from a lethal dose of mineral, vegetable or ptomaine poison, immediate relief is given by emesis or stomach-pump, and proper antidotes to counteract any portion absorbed.

"Clean Out, Clean Up"

A patient suffering from acute autointoxication has practically the same condition as the above, only that the toxins were elaborated by germs, the major portion of which were developed in the alimentary tract, and the whole of the latter must be emptied and rendered aseptic, or as nearly so as possible. In some instances it is best to begin with emesis, rectal enemas, or both, and then give remedies to clean out the many feet of alimentary tract that cannot be reached by these means. Of remedies there are none that equal the much-abused calomel of the ancients, in small and oft-repeated doses, to unlock all the glandular secretions, which thrown into the alimentary tract are best flushed by small and oft-repeated doses of magnesium sulphate or castor oil to effect. Both these good old remedies are to be had in palatable form. If the bowels are loose, as happens in some cases, then, of course, smaller doses are required.

Antiseptics—A Mistake Often Made

Where a mistake is often made, is in introducing the antiseptics into an overloaded and clogged alimentary tract. It would be just as reasonable to try to disinfect a clogged sewer by putting in germicides at the upper and lower ends as to render the human system aseptic with the alimentary canal practically paralyzed and overloaded

with filth. With the latter unloaded and the circulation partially, if not wholly restored, germ-killers will not cause nausea and distress and will have an opportunity to get to where the germs are. At the same time defervescent and hydrotherapy will equalize the circulation and help throw off or out the toxins; then heart tonics, reconstructives and predigested foods will ably assist the white blood-cells in their warfare on the germs left in the system.

Called early enough, this method will abort fevers and assisted by expectorants will jugulate pneumonia. If called later, the same treatment with additional remedies to relieve present and prevent further shock, will materially lessen the severity and duration of the disease. At this time keen judgment must be used, bearing in mind that the action of a remedy is always the same, but that the effect, especially of a sedative remedy, depends somewhat on the temperament of the patient.

For the Relief of Shock

To relieve and prevent shock, the greatest remedy is the much-abused but grand old alkaloid, morphine, combined with atropine or the more up-to-date combination, morphine, hyoscine and cactin or strychnine. These will sedate and calm the nerves of the dark-complexioned, bilious temperaments, but though calming the pain it may increase the nervous phenomena. In the latter case it is best to use the lighter alkaloids of opium and the nerve sedatives.

Called at a late stage, possibly, the patient is found pale, weak, covered with cold, clammy perspiration, showing that the circulatory organs are below par. The urine is found loaded with albumin and blood, bowels tender and tympanitic, bronchi involved; in fact, the system is loaded with germs and their toxins and the nervous system is shattered by repeated and continued shock. The human system is tenacious of life and similar cases have recovered under "expectant" treatment, but this method can be discounted.

Atropine will let glonoin bring the blood to the surface and heart tonics will keep it

there; sedatives will relieve the nervous condition and prevent further shock, while the alimentary tract is carefully unloaded and disinfected, and later toxins and effusions are still further unloaded by diuretics. At this stage ulceration may cause hemorrhage, so now, in addition to the above, ergotin for immediate and hydrastine for future effect must be administered. The same holds good for any hemorrhage but is not needed where mechanical assistance can be given, and if the stomach is intolerant, hypodermics may best be used. Hot applications or cutaneous irritants assist materially to bring to the surface, and hold there the circulation and to relieve inflammation and pain.

In conditions the extreme opposite of the above—the result of scarlet-fever, pregnancy, when the circulatory organs are at high tension, excretions all deficient, the patient perhaps in convulsions—then remedies to relieve and prevent further shock, together with pilocarpine to unlock all the excretory glands, especially of the skin, and after that treatment along the lines outlined above will give most satisfactory results.

Proper diet and habits will cause proper elimination, but when this has not taken place in pregnancy, immediate cleansing and elimination followed by proper diet, especially buttermilk and fruit juices (the best of which are lemon and pineapple) will do the work, and, as already stated, magnesium sulphate is the best cleanser extant and can be had in palatable form; but even in its crude state this salt is not unpleasant when given in small and oft-repeated doses.

Arsenic and gold bromide, pushed to saturation, will stimulate the cells as nothing else will, relieving the system of effete material and curing diabetes up to a certain stage, while mercury, gold and iodine will do the same for syphilis.

Home Treatment of Tuberculosis

Patients afflicted with tuberculosis can be treated along the foregoing lines at home just as well as elsewhere—and all chronic troubles require such a course—but often the added help of pepsin, pancreatin and bile

which will tone up and disinfect the digestive tract to the end that tonics and blood-makers will not long be needed as the system will soon digest and assimilate to the point that it will furnish all that is needed.

The writer still finds that some of his patients deflect to the "faith," "magnetic,"

and other healers, yet others passing to the "Great Beyond" while under his care, but he does not lose nearly as much sleep as formerly and has come to be an optimist in the practice of medicine since gaining a knowledge, superficial though it may be, of what seems to him to be truly Rational Therapeutics.

The Race Problem in America in its Relation to Criminal Sociology*

By G. FRANK LYDSTON, M. D., Chicago, Illinois

Professor of Genito-Urinary Surgery, Medical Department of the University of Illinois

EDITORIAL NOTE.—Recent statements made by Dr. Lydston concerning the negro race and the problems which are centered in it have been made the subject of perverted and inaccurate quotation by the newspaper and medical press. One journal heads a column with the line, "Lydston Would Have Whites and Negroes Marry," and it is represented that he favors miscegenation of whites and blacks. This Dr. Lydston brands as absolutely false. The truth is exactly the opposite, as any person familiar with his published writings can testify. Instead of favoring the mixing of races he has pointed out the danger which it entails and the imperative necessity of recognizing the existence of this problem and seeking a solution. This is the problem which he discusses here.

GLOSS the facts over as we will, evade the involved issues as hypocritically and as skilfully as we may, the race problem is a steadily growing cloud on the horizon of our American social system. It will, of course, be understood that by the race problem I imply the problem of the adjustment of the relations and interests of the whites and blacks in America. All other problems of race, when reduced to their sociologic ultimate, resolve themselves into questions of economics and religion.

The race problem did not begin with the landing of the first slave upon American soil, it did not begin with the freeing of the slaves, it began with the ill-advised attempt to place the recently freed negroes upon a civic and political equality with the white owners of American soil, with total disregard of the sentiments and environments of millions of the latter.

It should be approached with as little sentiment and prejudice as a diseased liver on the postmortem table. It is a cancer on

the fair face of America. That the negro has been a prime factor in the criminality of America since the Civil War is admitted by every observing citizen of this country; that the race problem has a distinctly local bearing, because of the large number of negroes in the South, is self-evident; that it will be one of the determining factors in the evolution of the distinctive American, and especially of the American criminal type, of the future, is almost inevitable. The statistics of amalgamation and of negro criminality alone are sufficient to indicate the formidable proportions of the race problem. Edelmänn says:¹

"There are in this country 866 criminals to every million of white inhabitants. The percentage of negro arrests in the southern cities is about 60. In Washington, D. C., with a population of 277,782 in 1901, 26,362 arrests were made; of these 12,582 were from the white population of 189,457, and 13,780 from the colored population of 88,325. Montgomery, Alabama, with a popu-

*Read before the Chicago Academy of Medicine, November 26, 1909.

(1)¹"The Negro as a Criminal," *The Medical News*, January 31, 1903.

lation of 30,346, made 2,687 arrests in 1901, of which 1,793 were from a colored population of 12,000, and 894 from a white population of 18,000. Birmingham, Alabama, with a population of 38,415, made, in 1901, 10,630 arrests, of which 4,030 were white and 6,600 colored. The city of Louisville has a population of 205,000, of whom 57,000 are negroes. In 1901 there were 7,958 arrests, and of this number 4,313 were negroes. In Nashville, with a population of about 63,000 whites and 37,000 negroes, there were, in 1901, 9,837 arrests, of which 6,081 were negroes. In Atlanta, with a population of 65,000 whites and 38,000 negroes, there were 17,286 arrests:—5,784 whites and 11,502 negroes. In Jacksonville, Florida, with a population of 28,429, there were, in 1899, 2,895 arrests, of which 976 were whites and 1,919 negroes.”

Professor Starr, of the University of Chicago, claims that in the State of Pennsylvania, where there is little opportunity to assert that the courts are prejudiced against the colored criminal, the negro furnishes 16 percent of the male and 35 percent of the female prisoners, although he forms only 2 percent of the population. In Chicago, which is said to be the negro heaven,” he furnishes 10 percent of the arrests, although he forms only 1.33 percent of the population.

Asserted Causes of Negro Criminality

DuBois,² while admitting the large proportion of criminality among the negro population of the South, ascribes their relative moral deficiencies to the following factors:

1. Economic conditions which in certain localities make the negro's freedom a mockery, and what practically is peonage.

2. Rebellion of the negroes against restricted rights and privileges, and unjust discrimination against them in the courts.

3. The malign influence of avaricious whites, the sons of “poor whites,” and of “unscrupulous Jews and Yankees,” who have found the negro a ready victim to their

desire for wealth at the expense of negro labor.

4. The “crop-lien” system, to which the ignorant negro falls a ready victim.

5. A police system that at its inception was designed to control slaves, and which, since the war, has discriminated against the negroes as a class.

6. The training of young negro boys to crime by putting them in chain-gangs with adult offenders.

7. An inadequate public-school system for negroes.

Most of the responsibility for the degeneracy and crime of the southern negro lies at the door of the National Government. The latter has handled the blacks just about as intelligently and honestly as it has the Indian. If the dominant political parties had paid more attention to the industrial, moral, and physical training of the negroes, who were suddenly thrown upon their own resources and responsibility after the war, and less to the cultivation and harvesting of their votes, it would have been far better for the South.

The Burden Imposed Upon the South

Few, indeed, of the people of the North fully appreciate the terrible burden imposed upon the South by the liberation of the slaves. Slavery was a fearful wrong, but it was a national wrong, and it was a crime to throw the burden of an evil that was originally legalized, fostered, encouraged and taken advantage of by practically the entire country upon the section to which it was finally confined. The negro was practically turned loose to seek his own salvation, and, aside from the self-interest of carpet-bag politicians and the warm interest of the republican party in his vote, little was done by the Government to ameliorate his condition or improve his intellectual and physical status. The history of the Freedman's Bureau is a history of a crime. The burden imposed upon the South was greater on account of the impoverishment and demoralization of the whites by the war, and was added to by the new race problem.

(*)“The Souls of Black Folk,” W. E. DuBois. It is evident that Prof. Du Bois' explanations fall in the case of northern statistics.

Whether the South would have adjusted its relations to the blacks more harmoniously and satisfactorily had it not been for the handicap of negro suffrage is an open question; but this much is certain, race prejudice, as distinguished from individual prejudice, was born on the day the first ignorant negro vote was cast.

What has been done since the war that has been of any practical value to the negro and to southern society has chiefly been due to individual philanthropy, on the one hand, and to the efforts of the South to improve the condition of the blacks in its own defense, on the other. The Government should bow its head in shame before the heroic Yankee school-ma'am and the more intelligent and philanthropic of the Southerners.

The Negro Race a Primitive One

A very important point for consideration in the study of the relation of the race problem to crime is the fact that the negro, like all other primitive peoples, is the product of a relatively simple and somewhat communistic social system, which of necessity imparts to him very crude ideas of property rights. Psychologically he is at bottom on a par with the children of higher races, and he is about as responsible as a child.

The natural shiftlessness of the negro, when left to himself, is simply a reversion to the primitive type illustrated by the native African, who is content with a breech-clout, a plentiful supply of grease for his glossy hide, and multitudinous wives to minister to his various appetites. There is but a short span between the primitive African and his American descendants. How much of inhibitory faculties should be expected to develop within so short a time in a race primarily so barbarous? Is the negro really as antisocial as we ought to expect him to be?

The dire immediate results of throwing a primitive race, previously held in bondage, abruptly into a civilized social system is shown by contrasting the record of the southern with that of the New York negroes. In New York blacks, owning a certain amount of property, had been allowed to vote for

at least forty years prior to the war. They had gradually evolved into a phase of theoretic equality of citizenship that led them to estimate their social status by the highest standard possible to their race. Such a condition of things necessarily imposed inhibitions upon them. The negro, under these circumstances, could not consider himself the victim of oppressive laws formulated by the whites, since his own race, for several decades, had participated in law-making. Law, therefore, among such negroes was to be respected rather than ignored.

The reverse, however, was true in the South, where the blacks were numerous, and passed with one bound from serfdom, in which there was no stimulus of independent thought, to theoretic equality and often to an assumption of superiority. The old adage, "If you put a beggar a-horseback he rides to the devil," would apply very accurately to the negroes thus suddenly thrown upon their own responsibility.

The delusion of "forty acres and a mule" very soon destroyed the compulsory thrift characteristic of the black in slavery. He considered himself the foster child of the party that freed him. Slavery had merely bottled up the primitive instincts of the race; it had not destroyed them. All there was of thrift and stability in his character had been impressed upon him in a more or less arbitrary manner by his owners. It was not the product of that evolution which characterized the negroes of New York City, for example, who, few in number, had in general been exposed to an environment favorable to their social evolution.

Northern Whites and Southern Negroes

The influences of carpet-bag government, as depicted by Pike³, were a very powerful factor in destroying negro respect for law and order in the South. The fallacious and pernicious teaching of the carpet-bagger gave the degraded black an exaggerated estimate of his own personal importance, based upon the market value of his vote. It also imparted to him the idea that behind

(³) "A Prostrate Slave."

him, as he went to the polls, stood an army of republican soldiers with bayonets fixed. Such influences have done much to increase the insolence and criminality of the lower-class blacks in the South.

The northern black has necessarily been surrounded by more inhibitory influences than he of the South. The lower classes of the northern whites, with whom the northern black has most frequently been brought in contact, have been better situated as regards opportunities for honest industry than the "poor white" of the South. The northern white, because of the climate and the influence of slavery, which is still felt, is more energetic than the southern white, and this necessarily has an influence for good upon the negro. The North has been more prosperous, and consequently his average opportunities for obtaining a comfortable subsistence have been better than in the South. The northern black has not been so much subjected to the mass influence of his own race, that is, he has been more individualistic than in the South, where the negro is segregated in large numbers. The mass influence in the case of the northern negro comes from the whites.

In order that civilization shall have a fair chance to influence the negro, he must have less opportunity for segregation than the South provides.

The quality and quantity of food obtained by the southern black since the war, as compared with that which he obtained before that great struggle, have been a factor in his degeneracy; he has missed his "hog and hominy." I do not think, however, that dietetics have had so important a bearing upon the question under consideration as the lack of systematic occupation conjoined with the forced assumption of responsibilities for which, by nature and training, he was unfit, to say nothing of the acquirement of vices and profligate indulgences for which he had no opportunities in his native wilds, and but relatively few while in bondage, and for which, while in slavery, he was held directly responsible to those whose interest it was to keep him in the best possible condition, morally and physically.

As slaves, the negroes were simply goods and chattels. Independence of thought and action was with them more theoretic than real, and had very little bearing upon their relations with the whites. They were accustomed to obey without question the dictates of their owners. Their environment was narrowing; their conditions for development of appreciation of their relation to the body social were peculiar; their thinking was done for them by others; they constituted a primitive social system within a higher one. The necessity for independent thought and action did not exist among them as it did among the whites. Attachment to the families of their masters and a general sense of obligation to the latter for their sustenance prevailed. Privation and want, those potent causes of degeneracy, were unknown among them. Personal physical responsibility for crimes and misdeeds was a prominent factor of their daily lives. Corporeal punishment was more awesome to them at that time than is the fear of the bullet or the rope today. Various inhibitory influences of plantation life were potent. Mass influence at that time resulted in something akin to *esprit de corps*. The advantage of good behavior—indeed, its absolute necessity—was a dominant influence in each little negro community.

Is Negro Criminality Strange?

With political turmoil, commercial confusion, and social disintegration surrounding him, is it surprising that the negro, thrown upon his own resources, should have developed highly criminal tendencies? What wonder that the attempt to materialize the chimerical dream of equality between the whites, with many centuries of civilization behind them, and the blacks, who were but a few removes from the cannibal, should have been productive of dire results? Loyalty to the master, respect for the mistress, and affection for the children of those who once cared for him melted away like dew before the sun under the circumstances in which the negro was suddenly placed.

The attempt of the southern black to adapt himself to his new surroundings prac-

tically began in this country with the close of our Civil War. Prior to that time he had no opportunity of demonstrating whether or not he could adapt himself to his social surroundings. Slow adaptation to environment is, of course, by no means confined to the black race. Some other alien races have been political, social, moral, and commercial misfits, in this country. The Chinaman will never make a good citizen. Fortunately, however, his natural instincts do not partake so much of the primitive animal type as do those of the negro, for the Chinaman of today is the product of a comparatively high grade of civilization, or semicivilization, which is essentially ethical, has prevailed for many centuries, and has developed certain inhibitions upon the purely animal propensities. The artistic talent of the Chinese is in itself an evidence in favor of this argument, for, up to a certain point, *pari passu* with the development of the artistic sense development of the higher inhibitory faculties occurs. The industry of the Chinaman in his native land, to say nothing of what is exemplified in his relations to our community when he settles among us, is another important factor.

Miscegenation a Question Which Keeps Bobbing Up

The question of cross-breeding of white and black, like Banquo's ghost, is one that will not down. Legislate and moralize as we may, we can never erect barriers that will confine the stream of black blood to its own banks and channels. So long as human morals and human passions are what they are—and we can not hope ever to completely subvert them to American ideas of altruism—the black and white streams will intermingle. It is not possible that a distinctly black race, comprising millions, can survive in the midst of a larger community of whites. There are more than two million mixed-bloods now; what will the next century show? It is not possible for a stream of white blood to flow on, year in and year out, side by side with a stream of black blood—or, rather, surrounding the latter on all sides—without becoming con-

taminated by it. Struggle as we may, a gradual blending of the two streams is inevitable.⁴ Even were it possible to prevent this, it would still be only a question of time when the negro race would insist on the practical application of those rights which are almost theoretic. The Fourteenth and Fifteenth Amendments, which have always been a farce or, at best, impotent, are then likely to be a serious bone of contention. Negro demagogues are likely to arise sooner or later, and the long-talked-of "race war" will become a reality.

An unfortunate and unavoidable feature of miscegenation laws is that they infringe on personal rights and conflict with the natural law of sexual selection. Such laws abrogate the constitutional rights both of blacks and whites who purblindly desire to intermarry. The right to the pursuit of happiness revolves largely around sexual selection. Miscegenation is an unmixed evil, to be avoided with all the power that in us lies, but there are bound to be certain individuals, both white and black, who—aside from merely animal impulses—like certain anarchical fanatics, can understand only the strict letter of the Constitution, and are blind to the advantages of any altruistic legislation that conflicts with it. Not only are they blind but rebellious. Let it be noted that miscegenation laws penalize moral matrimonial relations and put a premium on illegitimacy. Law or no law, amalgamation, like Tennyson's brook, goes merrily on forever.

There can be no question that extensive cross-breeding of blacks and whites would bring social disaster in its train unless there were a change in our present attitude toward the negro. Still greater disaster would, however, accrue to the negro himself, for unrestricted mingling of white and black blood would mean for him race extinction. The price he pays for an admixture of Caucasian blood is degeneracy of the deadliest type. Infertility and increased susceptibility to disease are slow but sure extermin-

⁽⁴⁾Only sterilization of the entire negro race can, in my opinion, prevent amalgamation. He would be a bold man who should even advocate this. It would be opposed on humanitarian grounds, to say nothing of its impracticability.

nators of a race. Possibly herein lies the final solution of the race problem. But then, will not the taint of black blood carry the white race with it down to destruction?

He who would argue that even complete amalgamation cannot possibly occur must necessarily ignore all facts in history bearing upon the fate of a race within a race, which show that the weaker and less numerous is inevitably absorbed by the larger and stronger. He also must ignore demonstrable facts in our own experience with negroes. It is well to remember that the proportion of blacks in the United States is about one-eighth that of the total population. This number is more than sufficient eventually to contaminate the white race with black blood, and the large number of whites in our social system is certainly sufficient to

absorb the lesser stream of black blood. Personally, I am pessimistic as to the outlook.

The statistics of the proportion of negroes of mixed blood are even worse than appears on the surface. We are wont to speak of the mixed bloods as negroes whose veins contain white blood. Suppose we reverse the proposition and speak of mixed bloods as whites containing negro blood; "what is sauce for the goose is sauce for the gander." Even though the logic of my proposition be denied for the half-bloods—in the case of whom one can climb to either side of the fence—it surely must be admitted for the quadroon, octoroon, and other grades of mixed blood. These are not negroes, they are whites with a certain proportion of negro blood. Is not this the handwriting on the wall?²⁶

(To be concluded)

Hypertrichosis, or Hirsuties

How to Remove Superfluous Hair with the Electric Needle

By MAY CUSHMAN RICE, M. D., Chicago, Illinois

Gynecologist and Clinician, Illinois School of Electrotherapeutics; author of "Electricity in Gynecology"

II

DIFFERENCES in susceptibility to and endurance of pain on the part of individuals is forcibly demonstrated in the operation of epilation by electrolysis. One patient claims that it causes scarcely any pain, while another complains bitterly and is even unwilling to tolerate it. I find, nevertheless, that in those who suffer least the pain increases in proportion to the number of hours of work done. When there are but a few hairs, scattered about the face, there is no difficulty in removing them without anesthesia, but when the growth is extensive, a local anesthetic becomes a necessity.

After using various applicatins without avail, I tried a cocaine solution by cataphoresis. This is an excellent anesthetic for minor electrolytic operations when the positive pole is to follow the cataphoresis; but

with a few minutes' use of the needle with the opposite, or negative, pole, the cocaine disappears. This fact led to the use of a small amount of adrenalin solution with the cocaine. By contracting the blood-vessels the adrenalin serves to retain the cocaine in the skin. This combination, properly applied, renders the operation practically painless for from one-half to one hour.

Anesthetizer.—To secure anesthesia, a high degree of concentration of current is necessary. A special anesthetizer, allowing an unusually large amount of current for the size of the electrode, is required. Such a one has been constructed for this purpose. This anesthetizer is invaluable not only for cataphoric anesthesia for this work but also for the anesthetizing of any small area to

(*)According to the prevalent blindly illogical nomenclature, granting that my views are sound, the United States may eventually become populated by a dominant negro race. An individual with the smallest possible taint of black blood is classified as a negro.

be treated cataphorically, fissures and ulcers for example.

The instrument consists of solid block tin, surrounded by a hard-rubber rim which projects one-fourth inch beyond the metal. This forms a shallow cup, to be filled with cotton or flat pieces of lintine saturated with the solution. The metal disc is mounted on a metal stem terminating in a socket for the cord-tip. The stem is insulated with hard rubber so that it can be held firmly either by the operator or patient, as desired. The



Fig. 3



Fig. 4

size adapted to all parts of the face except the lip is one inch in diameter (Figure 3), and that to the lip is one inch long and half an inch wide (Figure 4).

Solutions for Anesthesia.—I keep on hand a bottle of cocaine hydrochloride, 10-per-cent, and one of adrenalin chloride, 1 : 1000. Before using, I mix the two in a dram-bottle, in the proportion of 3 parts of the cocaine to 1 part adrenalin solution, just sufficient to wet the cotton in the anesthetizer.

Choice of Poles

If a steel needle is connected with the negative pole and inserted into the tissues, decomposition takes place wherever there is contact with the metal, but especially at the point of the needle.

The alkalis, attracted by the negative pole, accumulate about the needle while the acids, repelled by it, appear at the positive electrode. The negative pole, in consequence of its alkalinity, softens tissue and renders it easy of absorption. It does not oxidize metals; therefore the steel needle, the advantages of which have been given, can be used. The positive pole is directly

opposite in character. Because of its acidity it hardens tissue, and this is not easily absorbed. The steel needle is oxidized, sticks in the tissue and consequently can not be used.

Therefore the negative pole is the one best adapted in all respects for epilation. By means of it we are enabled to concentrate the action of an alkaline caustic upon the papilla and completely destroy it without producing perceptible scars.

Technic

After selecting a needle suitable for the case to be treated, put it in the needle-holder and place it in a large-mouthed bottle containing alcohol. If the glass on the needle-holder is used, this acts as a support so that the needle is suspended in the alcohol (Figure 2). Test your apparatus for current and also for polarity, if there is any chance for doubt, as may be the case if several people use the same appliances.

When the patient has unfastened the collar, place the cotton pad, wet with warm water and connected with the negative pole while the anesthesia is being used, upon the upper part of the back, protect the clothing by covering the pad with rubber sheeting and take care that the metal cord-tip and connector are so covered with the rubber that they cannot burn the skin. So arrange the table or operating chair that the patient's head will be in a good light and as low as possible. Never attempt to remove superfluous hair with the patient in any other than the recumbent position. After thoroughly cleansing your hands prepare the field of operation by washing with liquid soap and water and then applying alcohol, either in full strength, or diluted if the skin be especially sensitive. Wash off the alcohol with boiled water before anesthetizing.

Now put a layer of cotton or lintine upon the anesthetizer and wet thoroughly with the anesthetic solution. Apply this, after connecting with the positive pole, to the part of the face to be treated. Gradually turn on 10 milliamperes of current and let pass for five minutes. Then turn off the current and reverse the two poles, connecting the needle-

holder with the negative and the indifferent pad with the positive pole.

In consequence of the adrenalin carried into the tissue the anesthetized area will be definitely outlined as a white patch. Anesthesia will be only partial at the border but perfect in the central portion of this patch.

With the thumb and forefinger of the left hand stretch the tissues firmly so as to show definitely the minute point of entrance of the hair into the skin. Then, following the direction of the hair-shaft—our only guide to the root and the location of the papilla beneath it—pass the needle in from 1-20 to 1-16 of an inch, until you notice a slight resistance. Turn on the current, 1-2 to 1 milliampere, according to the size and location of the hairs treated. One-half milliampere is sufficient for the lip, eyelids and bridge of the nose; the chin, neck and sides of the face require from 3-4 to 1 milliampere; but that amount should never be exceeded.

At the junction of the skin with the needle a bubble of hydrogen appears. It is merely an indication that electrolysis is taking place, and as the same phenomenon would result from an introduction of the needle accompanied by the current in any part of the skin, it is not a sure index that the papilla has been reached and is being destroyed.

Leave the needle in a few seconds, varying from ten to sixty according to the strength of the hairs; this can be determined only after two or three hairs have been removed. Hold the needle steadily for a few seconds and then gently rotate it about the hair, when, often, the hair will move with the needle, showing that it has been loosened. Whether this occurs or not, after a few seconds remove the needle and with the fingers take the hair out, if to do so requires no traction. Otherwise, insert the needle and repeat the process. If possible it is best to destroy the papilla at the first insertion of the needle. The reintroduction of the needle causes

more decomposition of the skin and consequent possibility of scarring.

When the current is adjusted to the correct amount, leave it on throughout the sitting. The needle is more easily introduced with the current on and, the operation being practically painless, pain at the moment of contact with the needle (which operators generally attempt to avoid by having the patient complete the circuit after the needle has been introduced) is not a factor to be considered here. In the left hand hold



DR. MAY CUSHMAN RICE

a pledget of cotton or gauze which has been wrung out of alcohol, or other antiseptic solution if preferred, as dry as possible. With this frequently sponge the skin, removing the hydrogen bubbles and other products of decomposition, such as caustic soda and potassa, which appear upon the skin. Although these form only in small quantities, they are exceedingly irritating and will go on corroding the skin as long as they are allowed to remain upon it.

When a given area is anesthetized, it is desirable to take out as many hairs in that place as possible; yet, to avoid scarring, hairs should not be removed so closely to-

gether but that sound tissue will intervene between two points treated. The distance apart at which they should be removed will depend upon various factors, such as differences in the texture of skins and the strength and location of the hairs. More care is required on the lip than elsewhere.

The Number of Hairs Removable in an Hour.—As an hour is the average time of a sitting, patients at first are anxious to know how many hairs can be destroyed in that time. This will range from forty to one hundred and thirty, depending upon the difficulties in the case, the perfection of the anesthesia, and the skill of the operator.

After-treatment.—The best immediate application subsequent to electrolysis is water as hot as can be borne; this because of the determination of blood to the parts always following the use of the negative pole on any part of the body. This is succeeded by an antiseptic powder. The patient is instructed to avoid picking off the small eschars which tend to prevent infection and scarring and to dust with powder as often as desired. This I believe to be a better form of treatment than that with lotions and ointments, which, by keeping the skin soft, favor infection. Taking the above precautions, namely, care in cleanliness of hands, asepsis of the field of operation and sterilizing of needles, infection does not occur.

Effect Upon the Skin.—As a result of the electrolysis, at each point of introduction of the needle a red mark appears proportionate in size to the amount of destruction of tissue. In a day or two this is covered with a small eschar which comes off in from five to eight days, leaving a healed, slightly reddened surface. This gradually assumes a healthy appearance. In the healing process scar-tissue forms, but, unless too much current has been used, in such small quantities as not to be appreciable to the naked eye. The lip is more easily scarred than other parts of the face. Hence it is advisable for beginners to do a considerable amount of work upon the chin before attempting the lip. For the latter a fine needle with only 1-2 milliamperes of current should be used.

Frequency of Treatments.—Sittings may be repeated daily, different parts of the face being operated upon on different days. It is never wise to treat the same area oftener than once a week.

Since the death of the hair is dependent upon the destruction of the papilla, the question resolves itself into whether the papilla can always be destroyed at the first attempt. Beginners will fail, in difficult cases, to destroy every papilla and will get a considerable percentage of returns. Especially is this true when hairs have been pulled out, for this means of extermination adds to the difficulty by rendering the papilla hard instead of soft and by causing the root to change its direction. As described by the late Plym S. Hayes, when the hair has been pulled out, the root-sheaths are separated from the root and turn in upon themselves like a glove-finger. These blockade the passage, so that when another hair attempts to find its way through it seeks a path of less resistance. The consequence is that the hair-shaft, our only guide, is not in line with the root and papilla at its base and therefore it is very difficult to follow the root to the papilla. Thus it is apparent that the change in the direction of hairs caused by pulling them out furnishes one of the greatest difficulties with which the operator has to contend.

The inexperienced physician, seeing the decomposition of the skin and fearing a scar, will choose the lesser of the two evils and remove the hair while traction is still necessary. The papilla being but partially destroyed, another, somewhat weaker, hair will grow in its place.

Hairs which have been subjected to means of removal such as depilatories and shaving do not have their roots affected and therefore are more easily removed. The latter process, however, multiplies the number of hairs far more than the former.

The number of returns varies from five to twenty-percent with the character of the hairs, the technic and the skill of the operator. Even though some of the hairs return, no case offers so many difficulties that it cannot be completely mastered. Tedious as the task may be, one is repaid when a woman who

has long been forced to live the life of a recluse, because of her unsightly disfigurement, is able once more to mingle with the community without nervous torture.

A complete history of the case before beginning the work often prevents misunderstanding. If the mode of extirpation has been by extraction it is well to state positively that for a period of not less than two months hairs will continue to appear. It often is quite difficult to convince patients that from six weeks to two months is required for the growth of a hair. Being in the habit of pulling hairs out they believe those hairs which appear each day are the ones taken out two or three days ago. When merely the shaft of the hair has been destroyed but a few days need elapse to show an extensive growth. The downy hairs so treated having undergone stimulation require time for development and gradually coarsen for months or even years.

The fact that the eyes are extremely sensitive and cannot easily be anesthetized renders the operation for inverted eyelashes exceedingly difficult. By putting a drop of cocaine on the eyeball to relieve its irritability and using a weak current, a limited number of hairs may be removed at a sitting. Owing to the difficulties in the case, conditions such as light, position, good needles, and perfect sterilization of hands and needles must be present. The eyelids should be turned well back, a very fine needle used, and only a small number of hairs must be removed at a time.

Those who have suffered from this intolerable disease appreciate beyond measure the relief experienced by a permanent cure. I have in mind one old gentleman who had suffered for forty years and was finally entirely relieved by the electrolytic process. For years his wife, with a pair of tweezers, had performed the task of epilation weekly. Not knowing which were inverted, she had removed all of his eyelashes.

One day into my clinic came a fashionably dressed and otherwise very handsome woman, approximately thirty-five years of age, with a profuse growth of coarse black hair running across the face, almost even

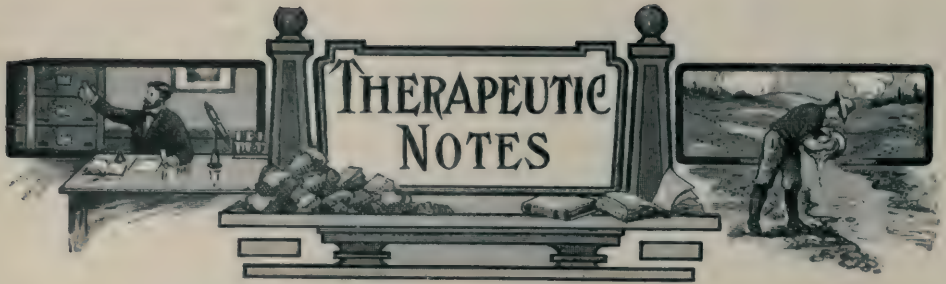
with the lobe of each ear, covering the chin and extending well down over the neck and throat. She told me she had had two hundred dollars' worth of electrolysis performed in one of the well-advertised facial parlors of the city. Completely discouraged at the continued reappearance of the hair upon her face, she besought me to make a trial. She proposed that I should consent to work on the basis of "no cure, no pay." If at the end of eight months the hair had not returned, she declared she would then pay me any price I might ask. I refused to negotiate on those terms.

For weeks afterwards the woman appeared at my office or at the clinic, fussing and worrying over her appearance and attempting to obtain from me some guaranty or retainer that I would be successful. One day she came in, cash in hand, and asked for an hour's sitting. The next day she returned and asked me to do some more work. Two patients failed to appear and so I gave her two hours. The third day she came again. At the end of a fortnight I had covered such a large area that her face was rather sore, and so I suggested an interruption for a week or more. At the end of three months her face was comparatively clean.

But just there the critical point, as in all other cases, appeared. When a patient has been watching the hairs gradually disappear and the face become comparatively clean, the memory of the extensive growth present before treatment was begun seems to grow faint and the demand for an absolutely clean surface increases correspondingly. As hairs come in that have been removed by means other than electrolysis and that have gradually been working upward, the patient, in spite of herself, will almost invariably become discouraged.

When the loss of faith is imminent the skilled practitioner will use the utmost tact in persuading the patient to keep up faith and continue treatments until the hair is all removed.

It took only seven months of judicious treatments to clear this woman's face and she has been one of the most grateful patients that I have ever had.



TREATMENT OF BRONCHIAL ASTHMA

The drug-treatment recommended by Dr. J. P. Oliver, in a recent article in *The New York Medical Journal*, is as follows: First, treatment during paroxysm is directed to the immediate relief of the patient. To accomplish this as speedily as possible, if the patient is an adult, he administers hypodermically morphine sulphate, 1-8 to 1-4 grain, and atropine sulphate, 1-150 to 1-100 grain, repeated if necessary in two or three hours. Sometimes, if the patient is neurasthenic, he uses hypodermically from 1-20 to 1-10 of a grain of apomorphine hydrochloride, and in addition 1-60 to 1-40 strychnine nitrate to prevent excessive depression from the effects of the apomorphine.

For constitutional treatment during the intervals the following is used: Potassium iodide, from 2 to 6 drams; corrosive mercuric chloride, 1 to 2 grains; 10 grains of ammonium chloride to dissolve the mercury; Fowler's solution, 1 to 2 drams; distilled water, 3 ounces. From a teaspoonful to a dessertspoonful, three or four times a day, beginning with the minimum and increasing to the maximum, is to be given.

HYOSCINE IN PARALYSIS AGITANS

This drug is very efficacious in decreasing the tremors of paralysis agitans, and if the complaint is in an early stage, the troublesome shakings of the hands may not only be decreased but in some instances actually abolished for the time being. Even in those more decided cases in which this drug only succeeds in lessening the tremor, the latter remains lessened for some days

afterward. The drug is given hypodermically in precisely the same way as one administers a morphine injection; and the dose may vary from 1-250 to 1-100 of a grain once daily. Some patients react to smaller doses of the drug than do others. The susceptibility to it should be ascertained in each case by starting with smaller doses, which may be gradually increased if necessary.

DIABETES

The treatment of glycosuria should comprise, says Burggraevae:

1. Strychnine to incite the nervous system.
2. Cicutine and camphor monobromide as antigenesics.
3. Salines to reestablish the alkalinity of the blood.
4. Quassin and sodium arsenate as digestives.
5. A laxative saline in the morning to refresh the blood serum and calm abnormal thirst.

THE IRON IN RUMEX

Babouriech and Saget have been experimenting upon the root of rumex and find that it contains nearly one-half percent of iron, a proportion greatly in excess of that yet found in any other plant. Further experiment shows that the iron is present in organic combination. It is difficult to isolate and identify such complex substances, but evidence was obtained that the compound is analogous to the ferric derivatives of the nucleones; these, as shown by Siegfried,

are present in milk and in the muscles and other tissues of the body. It is thought that iron, lime and phosphoric acid are carried from one part of the body to another in the form of nucleone derivatives. Many believe that a large proportion of iron administered in inorganic form is not assimilated in the body, and on this account various organic compounds have been introduced into medicine, including the glycerophosphates and so-called succinate of iron. The administration of iron as a nucleone derivative, as present in rumex, would appear to offer advantages over other compounds, and this view is supported by results following the administration of rumex by the mouth.

—*Practical Therapeutics.*

ESERINE SALICYLATE IN POSTOPERATIVE VOMITING

Dr. Charles H. Breuer, of Cameron, Texas, writes us as follows:

"I use eserine salicylate tablets for post-operative vomiting. You recommended it in CLINICAL MEDICINE, and I never had better success. Now I use them always when the patient tries to vomit, and they stop it at once. We never have had any trouble with vomiting or postoperative bloating since I commenced to use them. I would like to hear from others, who have had experience. It is a boon for laparotomies. The patient's bowels move freely on the second day after operation and as soon as the bowels move they 'feel like a bird'; they are sick no more, and can eat and drink with impunity, and never get so emaciated from starvation as patients used to do before I commenced their use."

PRUSSIC-ACID POISONING

A child had eaten freely of roasted bitter almonds. She was pale, temperature subnormal; pupils dilated, insensible and fixed; sight and mind obscured, breathing difficult, heart palpitating, pulse small, tongue dry and saburral, much foam in the mouth. An emetic was not helpful; clonic convulsions came on, the pupils contracted, the

child became insensible; trismus, vomiting, urine and feces discharged involuntarily. The hair was cut and mercurial ointment rubbed into the scalp, an enema of coffee given, sinapisms applied with cold to the head. Patient grew worse. After leeches to the mastoid the convulsions ceased, the coma increasing. In this desperate crisis strychnine arsenate was given, and at once an improvement was manifested, and recovery ensued.

POISONING BY KEROSENE

Dr. H. L. Kerr, of Sparta, Mo., has given some attention to the question of coal-oil poisoning. He notes that in every instance reported the patient was strangled, and draws the inference that some of the oil penetrates the bronchial tract. The active principles in the oil, whatever they may be, are rapidly absorbed into the circulation. Locally the oil has not been shown to exert any deleterious effects upon the stomach, any more than it has upon the large bowel when thrown into it.

CATHARTICS FOR CHILDREN

Abt, in *The Archives of Pediatrics*, describes some experiments made with a view to testing the irritation induced in children by the use of the ordinary cathartics. He found children receiving one grain of calomel, singly or divided, showed irritation on the following day by the presence of mucus and occasionally of blood in the stools. Those receiving two or three grains of calomel at one dose showed both blood and mucus, persisting two or three days. When calomel was given in divided daily doses of 1-10 grain for some days, the reaction increased in intensity from day to day. Small single doses of magnesium sulphate, as one dram of the saturated solution, produced a little mucus. Large doses, after the third, showed the reaction for blood, but not as much as from calomel. Dram doses of castor oil produced no irritation. Two drams given at once caused irritation in one case, but not in another. Given in

dram doses to two children for three successive nights both showed irritation after the third dose.

ACUTE RHEUMATISM

"In acute rheumatism," says Prévault, "I had the average success with the old treatment, especially when employing blisters. Since I learned to attack this dolorous affection with veratrine and aconitine, it is with astonishing rapidity that it progresses toward the cure, while relapses have also become very rare."

THE ALKALOIDS VS. ALCOHOL

At the last meeting of the Society for the Study of Alcoholism and Drug Habits, Professor Waugh presented a paper in which he held that there is no use to which alcohol can be put as a remedy for which we have not better agents in the resources of modern therapeutics, and that alcohol, therefore, is not a necessity to the present practice of medicine.

This paper has been republished by the United States Senate, in Senate Document No. 48, and can be had by application to your Congressman or Senator. Nobody who feels any interest in the alcohol question—and who does not?—can afford to be without this valuable collection of papers, the latest pronouncement of the men who have most deeply studied the various problems resulting from the use and abuse of this potent spirit.

APHONIA, WITH HINTS FOR TREATMENT

Aphonia may depend on diverse causation. It may be sudden or gradual, direct or reflex; of nature sanguine, nervous or glandular; simple or specific. We may have nervous aphonia, that of singers, forms herpetic, syphilitic, etc.

The treatment must vary with the cause. Congestive aphonia would call for leeches and emollients, but as it is often the prelude of phthisis we must be chary of blood losses.

Aconitine and veratrine relieve congestion, hyoscyamine dissipates spasm. Give a granule of each every half hour, and apply sedative cataplasms to the neck.

In chronic aphonia we give sodium benzoate and strychnine, a granule each every two hours. Nervous aphonia often disappears, as if by enchantment, under strychnine, hyoscyamine and phosphoric acid, a granule of each every hour. The aphonia of singers is often instantaneous. A curious remedy, which was once deemed quite effective, was a glass of hot beer in which a tallow candle had been melted; the derivation following the shock to the stomach proving successful. A drastic cathartic sometimes answers the need. There is here laryngeal injection, with paralysis of the vocal cords; calling for aconitine, digitalin and strychnine, a granule each every two hours (Burggræve).

But just imagine proposing the beer-tallow to a prima donna in a tantrum!

APEPSIA, AN IMPORTANT GASTRIC NEUROSIS

This gastric neurosis is too often overlooked, and the sad consequence of its neglect it too often tuberculosis. The cause may be psychic or physical. In convents and prisons tuberculosis frequently begins with apepsia. In one case a girl of 15 years displayed loss of appetite, the other vital functions suffering in consequence. Improvement followed clearing the gastrointestinal tract, but then the malady returned. A slight, frequent cough aroused fears of tuberculosis, but the physical signs were absent. She had continuous fever, pulse 120, temperature 102.2° F., the tongue slightly coated, lienteric diarrhea.

The treatment advised by Burggræve was a generous diet, quassin before meals and sodium arsenate. In similar cases striking results have followed the use of saline laxatives and calcium sulphocarbolate, diastase and quassin at meals, and minute doses of copper arsenite, gr. 1-1000 hourly while awake. Hot salt-baths and rubs to bring the blood to the surface are of much value. If amenorrhea is present iron is the remedy,

and while the fever persists this should be given as quinine hydroferrocyanide. The diet should be rich in easily appropriated proteids, such as sea foods, eggs and junket or clabber, with abundance of pure fresh-fruit juices.

When this symptom group coincides with the establishment of menstruation the utmost care should be taken to comprehend the mental as well as the physical status. The awakening of sexual life sometimes occasions the beginning of bad habits; or the most astounding eccentricities of thought and emotion occur with some shy, quiet young maiden, whom nobody suspects of a deeper sentiment than a longing for fudge or a new hair-ribbon. A prolonged visit to seashore or mountain, or better a radical change in the environment and mode of life, whatever it may be, is often desirable. The heart-strings become tendrils, ready to seize upon any support within reach, whether it be a religious theme, a lump of masculinity, or a heroic opportunity, such as came to Joan of Arc. The difficulty is that nobody may be acute enough to fathom the child-woman's mind, and wise enough to give the budding impulses proper direction.

Withal, the physical condition influences so profoundly the mental and moral life, that it must not be neglected. If our little new-woman is found to be eating ashes, or chalk, or butter, there is a chance to modify her moral vagaries by supplying the need of her bodily framework. Thought may not be a secretion of the brain-cells, but if these are supplied with intoxicated or impoverished blood, the product of mental functionation will be impaired in quality.

THE DOSE OF GLONONIN

Matthew finds the dose of glonoin required to reduce blood-pressure and relieve pain, headache, epistaxis and giddiness, when due to vascular hypertension, to be 2 minims of the official liquor trinitrini. This may be repeated in half an hour. Of sodium or potassium nitrite the dose is 2 grains, the action lasting two hours; of erythrol nitrite 1-2 to 1 grain, the effect

enduring six hours; of mannitol nitrate one grain.

These doses are usually too large, sometimes too small. Liquor trinitrini is not uniform enough in strength. Of the glonoin granules, 1-4 milligram each, many persons find one a dose too large for comfort. Half this dose should be given and repeated every five minutes till effect, by which all ills of under- or of over-dosage are avoided.

ALKALOIDAL TREATMENT OF CHOREA

A delicate boy, aged four years, after a fright began to show symptoms of chorea. He remained thus for three weeks, without sleep, unable to speak or swallow liquids. Treatment failed. He was then given a little milk with bromide, iron, etc. This was continued three months, without material benefit. For this case Burggraave advised strychnine and hyoscyamine, since there is in chorea paralysis as well as spasm.

Juhel reported a case of chorea in a boy six weeks old, nursed by his mother. The chorea was hemilateral, very marked. Juhel prescribed strychnine, after ether and iodide had aggravated the malady. A cure followed in three days, except for some grimaces.

AN OVERDOSE OF QUININE

An English Coroner's Court, says *The Medical Times*, has returned the verdict of death from an overdose of quinine. The woman had taken twenty-five grains, and this produced congestion of the brain, liver and lungs. The other organs were healthy. The overdose induced paralysis of the heart.

COLOCYNTHIN

Gubler termed this body the purgative principle of colocynth, but Burggraave pronounced this a mistake, believing the purgative power resident in the resin. He found colocynthin useful in abdominal obstruction, when combined with hyoscyamine, and often with strychnine.

SURGICAL AND GYNECOLOGICAL NOTES

BY EMORY LANPHEAR, M. D., LL. D.

THE SURGERY OF EPILEPSY

Operation is justifiable in every case of epilepsy where there has been injury of skull or brain-compression, decided improvement following in practically all cases and complete cure in a pleasantly large percentage. Exploratory trephining is scarcely more dangerous than exploratory abdominal section. Cysts and cicatrices may be found, removal of which gives brilliant results, sometimes. The objection that scars may form again is not a valid one since the location is changed; and cicatricial tissue following operation differs materially in character from that after-infection. Cloudy swelling, or edema, of the pia mater is often observed in epilepsy—even in nontraumatic; probably a “chronic inflammation,” so called. This fluid should invariably be removed, as improvement almost invariably results.

LIQUID SOAP

A liquid soap, without the disagreeable odor and stickiness of ordinary soft, or green, soap, may be made as follows:

White Castile soap.....	300 Grams
Stronger ammonia.....	25 Grams
Alcohol	350 Grams
Soft water.....	325 Grams

This contains the same amount of soap as tincture of green soap. Cresol (10 Cc.) may be added to give it an “antiseptic odor.”

RADIUM FOR TRACHOMA

Excellent results may be obtained in the treatment of trachoma by radium. Exposure for fifteen minutes every second day, about ten or twelve times, is sufficient. No results are visible to the naked eye—the papillary vegetations, the pannus and follicular granulations appearing unchanged.

But only a few applications of sulphate of copper afterward are required to effect what appears to be a perfect cure.

CURE OF PEMPHIGUS

Pemphigus neonatorum is now regarded as an infection of the skin with *staphylococcus pyogenes aureus*. It is treated by the same kind of antiseptic bathing as used for boils. After the bath the sores are to be covered with a 5-percent ointment of ichthylol in lanolin.

DYSMENORRHEA

Sometimes dysmenorrhea accompanies subinvolution, without any discoverable implication of tubes or ovaries; notably when the persistent heaviness and bagginess of the uterus depends upon an extensive laceration of the cervix. Examination of the nasty-looking discharge from the everted lips of the os shows nothing but staphylococci, and the endometrium is found free from bacteria. Cure is effected by repairing the laceration of the cervix. In such cases it is best to do this with silver wire or silk-worm gut, these stitches being removed on the tenth day when the torn perineum may be restored *ad integrum*; rather than trying to use chromic-acid gut for the cervix and doing both operations at once.

COLPECTASIA

As the result of numerous labors and sometimes of the introduction of various objects for purposes of masturbation, the vagina may become greatly dilated; as it may also from the extrusion of a uterine polypus into the vagina, where it may lie for months unrecognized. After removal of the cause, injection of a strong alum wash once or twice a day may reduce the vagina to

normal. But in some cases the dilation continues; particularly in those dependent upon labors, where there has been prolonged stretching and even rupture of the perineal muscles without destruction of the skin. If this is the case there is nothing to do save to make a close perineorrhaphy with excision of a large part of the vaginal mucous membrane; and also an anterior colporrhaphy in the worst cases.

TO CHECK SECRETION OF MILK

When it is desirable that the secretion of milk should be arrested, one Gram (15 grains) of ammonium acetate may be given four times a day. If pain is prominent a centigram (gr. 1-6) of morphine sulphate or two centigrams (gr. 1-3) of codeine may be given with it. At the same time the enlarged breasts may be covered with flannel smeared with equal parts of tincture of camphor and belladonna ointment and a binder applied. The breast-pump should not be used unless imperative.

HYOSCINE AND MORPHINE IN OBSTETRICS

Dr. J. A. Derugi in the *Medicinische Klinik* reports six hundred more to his one thousand cases of delivery by the aid of this combination. His conclusions are about the same as those of Gauss in a former series. Measurements of the amount of blood lost in 497 cases showed an average of 382 Grams, fully 95.16 percent of 571 deliveries being accompanied by merely moderate loss of blood. There was no morbidity in 536 cases, while in 17 there was some febrile disturbance of puerperal origin in 6, a febrile in 1, and nonpuerperal in the 10 others, the total morbidity being 4.68 percent. Of the 609 children, 7, that is 1.14 percent, were still-born, while 10 were nonviable. About 5.14 percent of the 609 children (i. e. 31) were asphyxiated and 9 of these children died within three days. In two cases death occurred from aspiration of amniotic fluid. Three children died between the third and ninth day; but 581

of the 588 children born alive left the clinic in good condition, that is, 98.8 percent. Is there anything better than this anesthetic in obstetrics! It is surely the "twilight sleep."

CONSTIPATION FROM MECHANICAL CAUSES

Gant calls attention to the necessity for considering the mechanical causes of constipation, which are often overlooked, the trouble being attributed to the better-known causes. In this class of cases, no matter how much time is spent in trying to educate the patient and improve his general condition, it is impossible to secure the desired result until the obstruction is removed. To accomplish this it is usually necessary to resort to some operative measure.

The following are the most frequent mechanical causes of constipation: Congenital deformities, which occur oftener in the rectum and at the anus than elsewhere in the gut; extraintestinal pressure, from cysts, tumors, inflammatory disease, etc., outside the bowel and which cause constipation by compression; strictures; malignant and non-malignant neoplasms; foreign bodies, either swallowed or formed within the gut; fecal impaction.

EXTRAPERITONEAL HYSTERECTOMY

In removing cancerous uterus, contamination of the peritoneum may be avoided by the Zweifel technic. An abdominal incision is made, the ovarian and uterine arteries are ligated, the uterus dissected out, the glands enucleated from above, the bladder and rectum separated from the vagina, but the vagina is kept unopened above toward the abdominal cavity until the two layers of the pelvic peritoneum, which have been divided in front and behind the uterus, have been accurately sutured. By this method the entire uterus can be drawn down under the bladder or rectum without invading the peritoneal cavity. After provisional suture of the abdominal wound, the uterus is extirpated *per vaginam*, any hemorrhage from

the vaginal arteries being prevented by the previous application of clamps to the perimetrium, which are later removed. The large wound cavity left after the vaginal extirpation of the uterus is filled with iodoform gauze, which is withdrawn on the tenth day.

MENSTRUATION AND EPILEPSY

Careful examination of clinical records shows there is a more than causal relation between the menstrual period and attacks of epilepsy, tending to corroborate the theory that epilepsy is associated with some sort of disturbance of the sexual centers. Strange to say dysmenorrhea has no association with the convulsive seizures so far as can yet be determined. Many epileptics have immunity from attacks during the period between menses. The convulsions appear just before or during the continuance of the flow in these cases of so-called menstrual epilepsy. Removal of the ovaries has often been tried; but these organs have nearly always been found to be normal. Excision of the tubes and ovaries does not give as good results as the administration of thyroid extract in this particular class of epilepsies. It should be given during the intermenstrual period, potassium bromide to be added only three or four days prior to the appearance of the flow.

APPENDICITIS IN GERMANY

The Berlin Medical Society some time ago appointed a commission to investigate appendicitis: its prevalence and proper treatment, as shown by statistics for 1907. In the hospitals 1344 cases were operated upon with a mortality of 14.6 percent. This is about three times as high a death-rate as a corresponding number of cases would show in American hospitals, for the reason that we operate much earlier, and upon patients who are so slightly affected that they would not be touched by the German surgeons, who call many of our operations "normal appendectomies." But, like our own experience, the figures from German hospitals show the vast advantage of early operative

work. Of the cases subjected to operation during the first forty-eight hours after the onset only 5.6 percent died; on the third day and after, 18.8 percent died. During the same period in the same hospitals there were 1021 cases of appendicitis not operated on, either because not severe enough or "hopeless" on admission. Had all of these been treated surgically, as would have been done in most American hospitals today, the mortality-rate might have been lowered to about 8 percent for all cases, and to 1.5 percent for the early operations, which is practically the same as our figures. Unfortunately the figures at hand do not show the percentage of recovery of the "innocent cases;" if more than 1 percent died the American rule to operate within the first twenty-four hours, whenever possible, would be shown better than the expectant plan of treatment, for selective operative treatment gives about 1.5 percent mortality in good hands, while medical treatment yields at least 8 percent of deaths, probably more.

CANCER OF THE INTESTINE

This is a curable condition if recognized early. It is more likely to occur in men than women, 60 percent of reported cases being males. The age of greatest liability is 50 to 70 years. As to location, the splenic flexure is by far the most common site, the cecum second, the ascending colon, transverse colon, descending colon and ileum being attacked in the order named. More or less symptoms of stenosis may occur while yet the case is operable; but when complete obstruction is present nothing but an artificial anus is possible as a rule. The chief late symptoms are: Colic-like attacks with visible peristalsis, borborygmus, feeling of fulness in the abdomen, vomiting, great relief after defecation, bloody stools, and severe tenesmus; and in about half the cases a tumor may be felt. Late cases show emaciation.

Diagnosis is not always easy. In the cases in which acute obstruction comes on without premonitory symptoms, the cases in which cecal cancer manifests itself in

a manner similar to appendicitis, and in those cases in which the history points to some stomach affection, it is particularly difficult, especially if there is no palpable tumor. Operation must, therefore, be exploratory in some instances.

If, on opening the abdomen in a suspicious case, the tumor is not very large and there is no metastasis in the liver, peritoneum, or distant lymphatic glands, excision is advisable. Infiltrated lymphatic glands in the region of the tumor do not necessarily constitute a contraindication; they sometimes can easily be removed, and besides they are not always carcinomatous but often only the seat of inflammatory swelling. Extension to the adjacent portions of the intestine, the bladder, uterus, etc., does not offer an insurmountable obstacle to operation, but adds to the danger. In about one-half of all early operations there is a perfect cure.

CHRONIC INVALIDS

Every community has at least one woman who has been in bed for many years; frequently such a one is cured by Christian science, osteopathy and faith. More of them might be cured by a careful examination and scientific treatment; for often an infection has left gross lesions which only the surgeon or gynecologist can relieve by radical measures, or a growth easily removable is the sole source of trouble. Such a case deserves the most careful study, sometimes, to differentiate from conditions which should be treated chiefly by suggestion, for as Goodell long ago pointed out, "in the vast majority of bedridden or of sofa-ridden women, it is not so much an existing uterine trouble that puts them on their backs, as it is nerve exhaustion from some nerve-shock; in these days of mental overstrain, nerve-exhaustion (or neurasthenia as it is technically called) is a most common disorder in our over-taught, over-sensitive and over-sedentary women; it manifests itself by hysteria, by spinal irritation, by a lack of nerve-coordination, and by a crowd of reflex symptoms, among which those of a uterine

complexion often overshadow, and indeed outlast, all the others."

THE WOMB AND NERVOUS SYMPTOMS

Fortunately doctors do not now so often give "local treatments" to the womb for the relief of nervous symptoms as they did a few years ago. They are learning that mere erosions and displacements do not count for much unless accompanied by infection (inflammation); and that insanity, epilepsy, etc., do not depend upon the local trouble, though they may be aggravated by infective conditions and rarely caused by them. Yet it cannot be denied that improvement follows, for example, repair of a lacerated cervix (and curetment for the accompanying subinvolution) even when the infection is not severe, by some process we cannot exactly explain; but it is very easy to understand how removal of a badly infected uterus and tubes may cure a toxic insanity, epilepsy, hysteria, neurasthenia: the source of toxemia is eliminated and nature given a chance to cure. Such cases are, however, not very common; so the medical attendant should be very sure of the existence of grave uterine or tubal disease before advising the "cleaning out" of the pelvic organs for relief of nervous symptoms.

HERNIA OF THE OVARY

Hernia of the ovary is a very rare condition. It is usually congenital, and when double, always so. The ovary may be in the labium majus or in the inguinal canal in the congenital variety; in the acquired it may find exit through the inguinal ring, the crural arch, the ischiatic notch or a ventral rupture. The fallopian tube sometimes accompanies it; the gut or omentum frequently; a part of the bladder very rarely. The inguinal variety is the most common. It is recognized without difficulty by the pain felt on pressure; that peculiar nausea and tenderness of the squeezed testicle or ovary, and by the swelling of the tumor just before the menstrual flux (Goodell). If

the hernia can be reduced a truss may be applied; if not, the sac should be opened, the ovary returned to the pelvis, the sac excised, the opening obliterated and the wound carefully closed to prevent recurrence. Should the patient decline operative measures a truss with concave pad may be worn to protect the ovary from external violence.

SOME CASES OF PUERPERAL METRITIS

One of our worst faults as a profession is our tendency to dwell so completely on one idea as to exclude all others from our minds. We have so thoroughly learned the lesson of emptying the uterus and disinfecting it in puerperal metritis that we forget the value of physiologic medication when conjoined to this measure. Here are two illustrations of modern exact therapy as applied to these maladies in the malarial districts in Holland. Presumably everything here receives the impress of the plasmodium and the use of quinine becomes a matter of course. The intrauterine cleansing is not carried out as we now do it, which makes the benefits of the treatment all the more notable.

Landman records the case of a Hollandaise, aged 34, two days over confinement. She had a chill, followed by fever, pulse 122, temperature 102.7° F., breasts engorged, lochia arrested, face red, very thirsty, tongue red but moist, consciousness unimpaired. Treatment: Morphine subcutaneously, quinine 2 Grams by mouth in divided doses. She seemed better, and the fever subsided for two days. Then she collapsed; temperature 104° F., pulse 130, breasts flabby. Repeated the medicine, adding sulphuric acid. Next day she was worse; delirious, furious, bowels and bladder emptying involuntarily, thirst intense, pulse and temperature could not be taken or medicine given. In despair the doctor turned to the alkaloids, and gave every hour a granule of strychnine arsenate, every half hour one each of aconitine and veratrine. Under these she grew calmer, the fever fell, she slept some; and from that time gradually recovered.

Mynliet reports another case, that of a peasant woman of 25, primipara, delivered by forceps, tearing the perineum. The third day came fever, abdominal pain, breasts swollen and tender. Gave 2.5 Grams of quinine, as ague prevailed. The fever rose, the patient became unconscious, lochia very fetid, vagina burning hot. Irrigated with phenol and salicylic acid; gave aconitine and veratrine, a granule each every two hours, one of strychnine arsenate every hour. For three days she improved somewhat but did not regain consciousness. The uterovaginal injections came away cloudy. Then came a change, with wild delirium, higher fever and excitement. Aconitine and veratrine were given every quarter hour, strychnine arsenate every hour, digitalin and hyoscyamine every half hour; one granule each. She slowly improved until the eighth day, following which there was another access of fever, which was at once met successfully by resuming the active dosage with the aconitine and veratrine. No further difficulty was met.

VAGINAL OVARIOTOMY

Small ovarian tumors as well as pus-tubes may easily be removed through the vagina. Anterior colpotomy is performed by catching the cervix in a strong vulsellum forceps and pulling strongly backward and downward until the anterior vaginal wall is tense, cutting through the vaginal mucous membrane from the cervix to within a half inch of the meatus urinarius, then making an incision across the base of this cut, clear across the vagina, each outer end curving slightly backward; the two triangular flaps are carefully dissected off from the bladder by fingers and scissors and separation between uterus and bladder continued in the same way until the peritoneum is opened. The sac may then be tapped if ovarian; if a pus-tube, a large pack of gauze (with string attached) must be pushed up within the pelvis to catch pus when the abscess ruptures. After removal the wound is packed with sterile gauze, left three or four days.



Dosimetric Treatment of Tuberculosis

Translated from "La Dosimetrie," September, 1909

By GEORGES PETIT, M. D.

ALL the world knows that a great number of drugs have been extolled for the treatment of tuberculosis, and I avow in all sincerity that if there are any good ones among them, there are also those that are useless and even, perhaps, dangerous. The reader, therefore, is not to expect here an enumeration of all the medicaments employed in this affection. I am content to say that if our therapeutic arsenal does not possess as yet that heroic specific medicament which is capable of jugulating the disease at one stroke it is, on the other hand, very rich in precious substances which when used with tact are capable of accomplishing veritable miracles. I might easily furnish the proof thereof if I could do it without exposing myself to the accusation of boasting, in placing before the reader typical cases of cure obtained by a very simple method which employs no mysteries, but which is simply rational.

I certainly do not dissemble in saying that the art of accommodating and adapting medicaments consists mainly in keeping in view the result which is to be expected from them, and here everyone may introduce one or another modification according as a case may demand. This is what I do myself, keeping myself as nearly as possible to a line of conduct at any instant which daily experience alone can justify, and which the certainty of alkaloidal action enables one to attain.

The tuberculous person ought to, a long time before becoming sick, avoid taking any useless drugs, because sooner or later he will have absorbed such a quantity that their anodyne constituents may become actually hurtful, if not in themselves then by producing an antipathy against all medication.

The medicaments which the tuberculous person takes should respond to three indications: (1) specific treatment, (2) symptomatic treatment, and (3) general treatment.

The specific treatment comprises among others all the list of serums and vaccines. I will not venture to enumerate any of these, and only say that if there be not a single sure specific among them all, yet are there among them those of real curative value the choice of which should be submitted to the physician who alone can judge of their necessity or their uselessness. A happy action in this respect is displayed by the so-called antidiathetic granules, which are composed of strychnine arsenate, 1-2 milligram, helenin, 1 centigram, and tannin, 1 centigram, from four to eight of these to be taken in twenty-four hours. These granules modify rapidly the bronchial secretions and raise the patient's strength.

I also wish to emphasize the great value of calcium sulphide, which is known [in France] by the name of sulphhydral.

The symptomatic treatment has for its aim the combatting, not of the cause of the

evil, but its effects, i. e., the fever, the cough, dyspnea, diarrhea, perspiration, expectoration, pains, etc.

To the dosimetric arsenal, already wonderfully well supplied with arms of precision, has been added for the physician's use iodoform, the use of which Filleau highly extolled in 1886 when I was chief of his clinic; so also brucine, of which Galopin recommends to give three granules per day. Then, also, we may utilize, according to indications, the defervescent trinity against the fever; Gregory's salt against insomnia; emetine and codeine as expectorants; glycerophosphate of lime and iron as a reconstituent, and also hydroferrocyanide of quinine for the same purpose.

The treatment, we see, is complex, and the entire arsenal of medicaments might pass through the hands of one who is not experienced, while an informed practitioner may, on the contrary, reduce the whole of it to a minimum. One has to guard well against overmedication, with which we may sometime strike the disease, but more often the diseased patient.

There is one medicament which seems to me to have a constant indication in all cases, and this is strychnine. This I administer in large doses in the form of the arsenate, and almost continually or at least for a long time, allowing intervals of cessation in all phases of tuberculosis. We should give but few medicaments and only such as are strictly useful.

General treatment is only second in importance to hygienic and medicinal measures.

The tuberculous patient must have his dietary regulated with mathematical precision for it is claimed with good reason that tuberculosis is a disease of decalcification. The alimentary regimen should, therefore, be the same as the medication of the tuberculous patient, aiming at recalcifying the system. This is the only means by which to make the pullulation of the bacillus impossible and would also halt the progress of the tubercular process.

I have seen a number of subjects who unquestionably had the disease and which was accelerated in its march by an exagger-

ated and brutal attempt at forced super-alimentation. A state of health is not the result of a corpulency, rapidly and artificially obtained, but the consequence of a general equilibrium of the economy. In judging the value of a person's weight we have to take into account his age, height, girth, habits, and antecedents. A tuberculous patient who has become fat is by no means a cured patient, he is rather one whose disease is aggravated, whose respiratory exchanges are rapidly diminishing, and consumption or the fatal end will appear the sooner the more his fatness is exaggerated. Forced superalimentation ought to be considered a danger, for the organism does not appropriate for its nutrition more than a certain quantity of aliments supplied, and it is compelled to burn the surplus. We have to come back to a rational and reasonable alimentation and abandon a method of feeding which in certain cases may become more dangerous than the disease itself.

I, for my part, am confirmed in this opinion by long experience and am a partisan of¹ a vegetarian or a lacto-vegetarian regimen.

I could here equally criticize the treatment of forced rest and that of exaggerated ventilation if applied to the lungs, but this would necessitate a consideration of the physiology involved. I will only say that the important thing here is that the patients should know how to breathe. We can not attain here any good results except by methodical exercise. As to rest, it has to be proportionated to the amount of work done. To say "rest" does not mean "permanent immobilization." The tuberculous patient must know how to respire, what to eat, how to walk, and how to rest, and all these are but parts of his treatment. He must, therefore, be watchfully taken care of or else you will have done your task incompletely and insufficiently.

NATURE, FUNCTION AND PATHOLOGY OF SLEEP

III

I am generally a decided opponent of hypnotics. A remedy of that kind should be taken only in exceptional cases, either

when a whole night was passed without sleep, or when, say, two nights in succession were passed with but very little sleep and then by midnight of the third day still no sleep has come. In persistent insomnia all known hygienic means must be tried first. Then, when they all fail, but not before, recourse may be had to medicaments. But even then we must use now and then the less harmful drugs, avoiding especially those which in time must be given in increasing doses.

Inasmuch as the indication in these refractory cases is the reduction of cerebral irritability, we should think first of bromine (1.5 Grams of sodium bromide in a tumblerful of water) or of valerian, or the mild combination of bromine with valerian as presented in bromural. Chloral is quite effective but rather more harmful. Less harmful is the 'chloral' compound known as isopral.

If the insomnia is very obstinate, then we must resort to stronger and, unfortunately, more injurious remedies, such as veronal. Of this, if at all possible, not more than 1 Gram (15 grains) should be administered; more than this may induce toxic phenomena. Veronal contains urea, which some patients tolerate very well, while others complain of heaviness in the head after taking it.

At times a single dose is enough to produce sleep during the next night as well. In no case should the stronger hypnotics, such as veronal, opium, morphine, be given as a regular remedy, since they may injuriously affect cerebral action.

I would recommend another, a physiologic remedy, which is based on the observation that the absence or the degeneration of the thyroid gland gives rise to sleepiness; I have always administered it with good results. It is the serum of animals who have been deprived of their thyroid gland. The striking similarity of the symptoms of diabetes with those of Basedow's disease, and taking in account my researches concerning the frequency of thyroid-gland hyperactivity in the diabetic patients, I was led to try in these cases a remedy which had often proved of

benefit in Basedow's disease. This is a serum prepared according to the directions of Moebius from dethyroidized goats and this is called antithyroidin Moebius.

With this serum I obtained not only a reduction of sugar secretion in diabetic patients (as I have described in my work on "The Origin of Glycosuria"), but in cases of insomnia also where I used the serum I invariably observed improvement. Suffering myself from obstinate sleeplessness in consequence of an automobile accident, I tried the Moebius serum on myself and found that every dose of 5 Grams (75 grains) procured for me eight hours of refreshing sleep. The effect on myself and on my patients was decidedly far superior to that of veronal. It only is to be regretted that the price of the antithyroidin is so high and that comparatively so large doses must be used, these being ordinarily not less than 3 Grams (45 grains) three times a day. This is a pity, for this agent, lowering the irritability of the nerves considerably, is very effective, and being of a physiologic nature, it is harmless provided no larger quantities were given than those I have named.

As long as this preparation of Moebius is not cheaper I advise for those less able to pay to use the milk of dethyroidized goats.

After I had delivered an address before the Society for the Promotion of Therapeutics and Natural Sciences at Amsterdam (March 15, 1905) on the hypnotic effectiveness of antithyroidin, Prof. Lanz confirmed my experience and mentioned his own with this kind of milk, with which he treated regularly his patients suffering with Basedow's disease. He told how he had requested the keeper of his dethyroidized goats to try the milk experimentally on his dog. The peasant did so, but soon desisted because it made the dog sleepy all day long.

[From Dr. A. Lorand's monograph, "Das Altern, Seine Ursachen u. Seine Behandlung durch Hygienische und Therapeutische Massnahmen" (Senility, its Causes and Treatment by Hygienic and Therapeutic Means). This is a book of great usefulness, coming as it does from a thoroughly equipped

practising physician of Carlsbad. It should excite considerable interest, and, I trust, comment.—THE GLEANER.

SECONDARY EFFECTS OF MODERN REMEDIES

An abbreviated statement from Dr. Otto Seifert's larger work on the subject, as given in the *Apotheker Zeitung*, 1909.

I. ANTIPYRETIC, ANTIRHEUMATIC, AND ANTINEURALGIC REMEDIES

Antipyrin.—Various and at times very difficult drug-exanthemata have been noticed. Antipyrin evidently acts as a poison on the walls of the blood-vessels, and the inflammation causing the exanthem apparently starts from the small cutaneous veins.

Aspirin.—The side-effects belonging to salicylic acid are headache and ringing in the ears, gastric phenomena of uneasiness, eructation, nausea and vomiting, stomach-ache. As further side-effects upon the skin and mucosæ there have been noticed various exanthemata and enanthemata. More rare side-effect observed are somnolence, a sense of deafness, diminished sensitiveness of the palate, tongue and throat, difficulty of deglutition, cardiac disturbances. Milk and alkaline water should not be ingested after taking aspirin so that the splitting up of the remedy may not take place too soon.

Attritin.—An aqueous solution of 17.5 percent of sodium salicylate and 2.5 percent of caffeine for intravenous and intramuscular injections. Occasionally this induces, in individual cases, pain, thrombi, tinnitus aurium, and tension-pains.

Benzosalin.—No side-effects have as yet been noticed, although the anodyne effects are missing in some cases and are so much the stronger in others.

Citrophen.—Toxic effects were noticed, these consisting of heart weakness, arrhythmia, cyanosis, cold extremities, perspiration, and a sense of faintness.

Diaspirin.—This is contraindicated in pulmonary phthisis and in all affections where sweating is undesirable.

Diplosal.—The untoward effects noticed were slight tinnitus aurium and salicylic inebriation.

Ester-Dermasan.—Effects slight perspiratory eruptions which do not disturb.

Euquinin.—Here and there this causes tinnitus aurium, heaviness in the head, and vertigo. In cases of idiosyncrasy there may be trembling of the lower limbs, vomiting, and a sense of heaviness in the stomach.

Euphyrin.—It hardly ever produces the formation of methemoglobin, but containing vanillin, as it does, imparts a sense of refreshing.

Glycosal.—After this remedy has been brushed on the skin freely, there often occurs perspirations, itching, a sense of giddiness, headache, tinnitus aurium, transient deafness, nausea and vomiting. Most patients complain of a bitter taste in the mouth when the remedy is taken internally.

Iodopyrin.—This produces, as a side-effect, profuse perspiration, coryza, conjunctivitis, and scratching in the throat.

Kephaldol.—There occurred nausea, vomiting, and an attack of profuse perspiration noticed after its use.

Kryegonin.—This at times causes strong perspiration, general depression, and restlessness.

Lactophenin.—Icterus is of relatively frequent occurrence, still, in typhoid it did not occur in spite of being given abundantly; however, at times there appeared in these cases disturbing and annoying attacks of perspiration; here and there, also vomiting, cyanosis, and collapse.

Maretin.—This, not rarely, evokes attacks of perspiration; now and again subicteric coloration of the skin and sclerótica. Collapse phenomena appeared frequently, also diarrhea, headache, and hemoglobinuria. Caution is necessary because of its tendency to cumulation. Against phenomena of intoxication inhalation of oxygen is recommended. The remedy is utterly unfit in pulmonary phthisis.

Novaspirin.—Very rarely gastric troubles or diarrhea were met with as side-effects from this remedy.

(To be continued)



The Average Doctor as a Laboratory Diagnostician

IT is my purpose to urge the use of laboratory work as an essential aid to physical diagnosis. The day has passed when guesswork, slipshod, snapshot diagnosis can be made. The old-time "therapeutic diagnosis" won't go now, either. I well remember one of my medical teachers who used to say: "If you suspect it is syphilitic, try potassium iodide and mercury. If he improves, that clinches your diagnosis." I wonder how many innocent people have been salivated by this advice. At a bedside I once heard a good doctor say: "Chills and fever, chills and fever—that calls for quinine." It proved to be gonorrheal peritonitis!

I do not need to emphasize the fact that diagnosis is everything and that symptoms are but helpful guide-boards to diagnosis. Yet, I wonder how many average men are treating their patients symptomatically. I wonder how many prescriptions are written and how much medicine is dispensed for symptoms only. Medicine is still not an exact science, yet we make it far more inexact by treating symptoms and forgetting diagnosis.

The average doctor may be and must be a good diagnostician. He must drill into his head all he can of Butler and other good works on diagnosis. He may practise constantly with percussion, auscultation and palpation. Still he must do or have done laboratory work. I may say, he must do it himself. He may employ a laboratory

specialist in the exceptional case to confirm his own findings, but for the run of his cases he must do the work himself. He cannot afford to pay the fees himself for every case, and the patient seldom understands why he should bear the expense. It is good business to do your own work—it is good professional policy.

Instead of investing that few hundreds you have saved in a town lot or in some highly praised stock of a mining or a manufacturing company, buy a good laboratory outfit. It will pay a good and certain dividend from the start. A small room, with running water, if possible, will do. Have plenty of shelving, cupboards, and a broad table or shelf for the several sorts of work. A good microscope with a sixth or eighth inch and an oil-immersion lens, and fitted with a good mechanical stage, is the foundation of the department. Now add your reagents and small utensils. A centrifuge, Bunsen burners, tubing, pipets, burets, beakers, flasks, test-tubes, etc., *ad libitum*. You may add an incubator as you progress.

If you have had no laboratory training in college, train yourself. Give yourself a course first in the study of urine. Buy Ogden (on the Urine) and then dig it out. You will feel like a boy again. Time? It will take some time, but not more than the average doctor wastes about the barber-shop or tinkering his buggy or automobile. Use the odd hours. It may cover a year, but it will be a great year for growth. Few, if

any, of the colleges give the student a thorough course in urine study. The younger men coming out know enough to begin intelligently.

"What's the use?" I'll tell you: better work, certainty in the treatment, closer hold on the patient. You know and they know you are doing the best work that anyone can do, and there is no use to change.

I am not going into details as to what benefit it is for you to know the urine contains albumin, acetone, blood, indican, as to the acidity index, etc. I am arguing the business importance of doing your own laboratory work.

While you are studying urine you will want to know something of stomach-contents examination. The bulk of your cases come to you for stomach or intestinal symptoms, especially your chronics. You will buy the works of Boas, Ewald and others perhaps. You will try the test-meal and become skilful in the use of the stomach-tube and aspirator. You will soon learn to recognize the total acidity, the free and combined hydrochloric, lactic and other acids, blood, etc. You will make some good diagnoses, when but for this work you might have failed.

The examination of sputum for suspected pulmonary phthisis is so simple you may do it as a routine work. So also pus and other discharges. You may extend your bacteriological studies to a wide field if you have inclination. You may examine water and milk, and you may with cultures verify your first findings. It becomes a very valuable aid to diagnosis when the patient fails to give you a true history, or when age or condition prevents your knowing the true cause otherwise, as for example gonorrheal ophthalmia in very young subjects.

You may wish to follow up the vaccine therapy. The future holds too much of great things to allow any live physician to ignore the laboratory method.

The study of the blood, fecal matter and pathological body-fluids is fully practical and possible in the doctor's laboratory, even though a small one. The microscopical study of urinary sediments alone will pay

you for all the expense and trouble involved.

It requires but little more equipment to examine pathologic specimens. Your own mechanical ingenuity will suggest ways to eliminate many of the more expensive tools. A cast-off razor, for example, will cut your sections as well as an expensive microtome. The same ingenuity will supply many of the utensils.

So by all means have a laboratory, and do there such study as will aid you in doing more certain and effective work, that you may hold your practice because no one can do any better for the people than you can, and they will know it.

It may be said that the doctor whose equipment for his work and whose activity accords with my picture is not an average man—that he is the exceptional doctor. If the average man did this kind of work, the struggle for business would be only that much keener.

I admit, as I said at the beginning, that it is all a question of the survival of the fittest; and he who says, "I will be one of the fit, the best that I can make of myself," he who plays the game fairly, in honesty and open square-dealing, who by competency and certainty in his work has no excuses and bamboozling explanations to make to disappointed patients—to such, it is hoped, these papers may be a healthy and stimulating encouragement.

It may be true, as has been said, a lot of good hack-drivers have been spoiled trying to make doctors of them, but the man who is a failure in the medical profession, either as a business man or as a doctor, has only to lay the blame at the door of his own stupidity or laziness, or both.

The price of success is work—intelligent, painstaking, scientific work—then, more work.

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[We cannot commend too highly the spirit in this, the fourth, paper in the series on "The Business Side of Medical Practice," which we are publishing anonymously. The profession is beginning to wake up to the importance of laboratory work as an aid to diagnosis. The better element of young

practicians is fully alive to the opportunities which this work presents for personal advancement. The man who does not wish to be outstripped in the race for success must fall into line with the rest, be prepared to do things, or he will see these youngsters coming up from behind, now "neck and neck," and finally carrying off all the professional prizes. If he has not the time to do the laboratory work himself (as many busy men certainly have not) he can at least familiarize himself with laboratory thought, learn its significance and get into touch with others who can do this work for him. Do it, Brother, you'll find that it will pay—and pay well!—Ed.]

SOME COMMENTS ON DR. MOELLER'S CASE, ALSO ON "HOW TO GET YOUR SHARE OF BUSINESS"

Some years ago in a medical society of which the writer is a member, the criminal abortion question was up for discussion. There was one candid doctor in that meeting. He said that if his sister should get into trouble, as we know some of the best girls in the best families sometimes do, and an abortion became the only alternative, to save her honor and future prospects in life he would produce it. Of course nearly all of the members present at that meeting jumped onto him for this assertion, yet we know, as a matter of fact, that a large percentage of doctors are performing abortions under one pretext or another, provided the unfortunate girl belongs to a family of sufficient prominence.

A few days ago a prominent citizen related to the writer and another medical man, how he got out of trouble in his family. I will repeat it, as nearly as I can, in his own language.

"Mollie had got into trouble. It was a foolish kid love affair. Neither of them was fit to get married—and it simply could not be. So I applied to our family physician, a good man, for help. He was horrified at my proposal and told me nothing could be done. I took the next train for the city and went to Dr. X., a noted surgeon and old

acquaintance, and stated my case. Before I got through the Doctor waved his hand and said: 'Stop Mr. So and So. You are of course mistaken—but bring the young lady down and let me examine her and see what the matter is with her.' Mollie went down to Dr. X., stayed at the hospital a week and came home all right. I paid the doctor a good round fee for his trouble."

How did that North Dakota girl or wife ever get it into her head to write such a letter to Dr. Moeller as she did? Why, evidently because she had been told by other women in the same condition how they had been helped out. Her letter implies that she knows it is not quite legitimate, but nevertheless that it is done all around, provided the unfortunate has the cash. In the town she lives in all three doctors are doing it, or have the reputation of doing it, but just now the priest has got after the Catholic doctor. The other is too high-priced, and the third is too busy, and so she writes to the doctor in another town—perfectly rational and business-like and true to life. And I want to say to Dr. Moeller that he need not be offended at the action of that girl. If all three doctors in the town she lives in are doing abortions, why should she not suppose that Dr. Moeller is also doing it? The girl is not to blame. If any is to be condemned for this letter to Dr. Moeller it is the doctor doing the abortion by the wholesale.

In the editorial comment it is stated: "To bring the course of pregnancy to an end by sacrificing the life of the unborn babe, except to save the mother's life, can have no moral justification." I believe your statement is untenable. Let me relate a case within my knowledge:

A few years ago a good-looking and respectable girl was raped by a negro and impregnated. When the father of the girl realized the plight of his daughter he, of course, applied to his family physician and demanded an abortion. Two other physicians were called in consultation and an abortion was performed. These three physicians and the father of the girl violated the statute law and could have been criminally

prosecuted and sent to the penitentiary could a jury have been procured to convict them. Yet these physicians and the father firmly believe there was plenty of moral justification for performing that abortion—that in doing it they were obeying a “higher law” than statute law, just as the “underground railroad” conductor believed when he was transporting negroes from slavery to freedom.

The writer contends that abortion is probably justifiable when the mother is an imbecile or ironically insane and the father is likewise a degenerate, though the life of the mother is not in danger. In all cases of rape-impregnation abortion is morally justifiable. It is monstrous to suppose that a woman should be compelled to bear and raise the offspring of a brute that has ravished her, be he white, black or yellow—common law, statute law or any other law to the contrary notwithstanding.

Our criminal abortion code is in exactly the same relation to the higher moral law as the fugitive slave law was just before the war. Then all the politicians and officers of the law advocated publicly the enforcement of the law, but helped the slaves to escape to Canada whenever they could without detection. So it is with the doctors now. They all preach enforcement of the criminal abortion law, but violate it when the party in trouble appeals to *them* personally—that is where they feel morally justified in doing so, —not for the money that is in it, but simply to help a weak, frail victim of man’s lust, a fellow human being, out of trouble—simply to be the good Samaritan to one sister fallen among thieves.

It is, I feel, this good Samaritan spirit in doctors in general that makes it a noble profession, the noblest profession on God’s footstool, despite our many drawbacks. Let the priest and the Levite pass by the poor unfortunate in trouble, with their Holy Writ and common law under their arms; let the lawyer study his volumes of statute law and declare that there is no relief for the victim of man’s lust and brutality. Yet as long as the good Samaritan spirit dwells in the heart of the physician the wounds of

the bleeding victim shall be dressed with oil and wine. This is why abortion goes on, laws or no laws to the contrary.

* * *

How shall we get our share of the medical business in our locality? That is the question we all must solve, for live we must if we do nothing else. You say, Mr. Editor, that merit, not money, should count in achieving success. Yes, merit does count, professional ability does count, but all the tricks of trade called “business ability” count very much more in achieving success. The real, good, conscientious doctor is, as a rule, not a business man—he hasn’t time to acquire the art of mixing. Hence, as a rule, the real good doctor can only hope to achieve moderate success, never need to expect to occupy any of the prominent stations in the medical world.

I would change the phrase: “Medicine is a noble profession, but a damn poor business”—to read damn *mean* business, mean beyond any other profession or trade because of the methods of competition you are confronted with. The capable lawyer goes into court and his opponent must face him openly. The engineer can draw his blue print and specification and his competitor must meet it on even ground. But the physician fights the battles behind the curtains of the sick room and through the vicious tattle of erotic or hypnotized female mentality. I have seen in my time a number of instances where a good man has been run out of a good business by the malevolent tongue of a worthless woman—sometimes as the agent of a rival, and sometimes actuated by revenge for fancied insult.

Of late years we have another business wrinkle up in this part of the land—the trained nurse as a drummer for the doctor. It is getting to the point up here that a doctor cannot do general practice unless he has one of these trained nurses to drum for him. Some of us old fellows, who are either too old to fascinate those young attractive women, or else cannot learn this new trick, of the trade, are evidently going out of business. We shall soon have to invent some new specialty.

Then there is the hospital racket as an advertising machine. We have hospitals galore, two or three where one could hardly live, but it seems that we must have them or go out of business. You see the hospital management can get write-ups of the great work done at the Institution, of the wonderful cases and distinguished persons that have been there. As ethical medical men we try to procure such write-ups all we can, but as a rule we don't succeed, you know.

Then there is the relation between the druggist and the doctor to be managed. I know of an old doctor who has for over twenty years thrown all of his business to a certain druggist, and practically made the latter. But one fine day a new doctor came to town and took the fancy of the druggist, and after that the old doctor was "no good." The new doctor saw all the files of the prescriptions of the old doctor and the latter was done up in no time. That transaction made me aware that the practice of medicine is a damn mean business.

Now the doctor who can work all these agencies for his interest—the talking women, the trained nurse, the hospital and the druggist—is going to get the business and the cash, whether he is a competent and reliable medicine man or not. He may call any pain in the chest a pleurisy and tap for it, every cough incipient tuberculosis and give tuberculin, and every spell of indigestion appendicitis and operate for it—and "cure" all, and get credit for great skill both in his community and elsewhere; while the competent, honest, reliable medical man who cannot or will not command these agencies may do the most exacting scientific work imaginable, only to be, not only ignored, but condemned and abused in his home by the yelping curs of his big-man rival.

"Medicine is a noble profession but a damn mean business."

This applies to small towns with from two to a dozen doctors.

CHRISTIAN JOHNSON.

Willmar, Minn.

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[Doctor Johnson writes well. He takes a strong position and he defends it ably, and

yet I must dissent from him on a number of points. While I do not think he so intends, yet his letter might serve as a defense of the too prevalent custom of producing abortion upon any woman that may come along. That this custom is unfortunately prevalent is shown by the very text of the doctor's article. Thousands of physicians *are* doing this thing and trying to justify themselves in it. What arguments can they bring to bear which will be sufficiently telling? Dr. Johnson comes to their aid with the fact that a young woman was impregnated by a negro during a rape. This fact he uses as an argument to prove "untenable" my statement that "to bring the course of pregnancy to an end by sacrificing the life of the unborn babe, except to save the mother's life, can have no moral justification."

Let us, if you wish, admit that here is an exception to the general rule—I might say an exception that proves the rule, for how many of the women who apply to physicians for relief can cite such a reason? Of the hundreds of thousands of abortions produced annually in this country I doubt if five are ascribable to such a terrible misfortune as this one. The number which occur in which the woman is not a consenting party is so small as not to be worth considering at all. The rule, as a rule, may stand as I have given it. The exceptions such as those adduced can be used only to bolster up a morally weak and ethically unjustifiable position. And I am not defending the seed of the rapist, the imbecile or the criminal, which I do not wish to see perpetuated.

But how about the doctor who, acting the part of the good Samaritan, violates the laws of the State (and many of us, at least, would add, the moral law) because some poor, weak, anguished sister beseeches him to help her out of trouble? Is he a "good Samaritan" who condones crime and, therefore, becomes a party to it? No, I say! By so doing does he not encourage the very immorality that gives rise to the crime? Does he not in the very illegal operation itself endanger the young woman's life? Yes, unqualifiedly yes! We all know there can be no other answer.

Our "good Samaritans" could accuse their brother physicians who refuse to do this thing of belonging to the "priests and the Levites" who passed by on the other side if their skirts were entirely free from the muck of self-interest—for what man among them does not seek to make this kind of business *pay*? A good Samaritan who pats himself proudly on the breast, asks the world to see in him a "good fellow" for listening to a woman's plea for help in time of trouble—then pockets his twenty-five or fifty dollars, after committing a crime, as the price of that help! The "priest and the Levite," who (possibly because they have consciences and use them) often need greatly—very greatly—the money which they refuse to take because they think it the price of wrong-doing, can not suffer much by the comparison.

I have used the word "crime." The lives that are destroyed by an abortion are as real as yours or mine. They are potential souls, having in them no man knows how much of promise to the world. What right have you or I to destroy them? Some other time I am going to tell you of the great men who were bastards—poets, statesmen, great warriors, yes, even kings and popes.

In the second half of his article Dr. Johnson strikes some pretty hard blows—all the harder because there is a good deal of truth in what he says. All the underhanded methods of touting for business, such as he describes, we should condemn just as strongly as he does. Trickiness, graft, pretense, self-praise, falsifying about cases—all these things are used to get business; and if medicine *depended* upon these I should agree with the doctor that it's a "damn mean business." But in the long run *it doesn't*. That old saying ascribed to Lincoln that "you can't fool all the people all the time" still holds true.

It is becoming more and more necessary with each passing day for a physician to know his business and know it thoroughly. The pretense that passed for knowledge is not merely going out of fashion; people are getting to recognize it, and the "four-flusher" will finally be showed up by his fellows—and

that's one of the things that medical societies are (or should be) good for.

Really, I do not think this is half as bad a world or that our profession is half as "mean" as Dr. Johnson would make us believe. At heart most men *want* to do right, to be of service. Most of the faults we find in other men are due to the fact that we overlook their virtues—while we are hunting for the bad things.

But we should not forget that it is not enough that a doctor should know things; he must be able to do. The same qualities that make for success in any calling in life apply here equally well. It is important that we should make friends, and having made them, keep them. Isn't it well for us to try to do this? Isn't life after all sweeter, as well as more profitable, for so doing? Isn't it worth while from any point of view to make ourselves "mixers"—which means that we like other people and they like us—rather than to shut ourselves up in the narrow cells of our discontent and rail at other people—and the world? Yes—that's my answer.—ED.]

FOREIGN BODY PASSED FROM THE BLADDER

The following case may possibly be interesting to some of your readers; it certainly is unique. A young man came to me complaining of intense pain in the bladder, frequent micturition, and during the next few days he began to pass almost pure blood, thoroughly mixed with the urine. The history of the case was as follows:

The man is a chauffeur and during his stay with the owners of the car joined a summer athletic association. Part of the initiation consisted in several of the members holding him, *vi armisque*, and introducing one of those long sticks of solid paraffin (the kind housekeepers use in sealing their preserves in jars) into his penis and lighting a match stuck in the end of it. During his struggles part of the taper was evidently broken off and was causing the trouble. Rhus aromatica and atropine controlled the hemorrhage for a day or two, but it returned as bad

as ever. I told him the only thing to do was to open the bladder and remove the wax.

He put it off for a day or two, luckily as it turned out, for one morning he literally danced into my office, and in his hand he had two pieces of the offending taper, which he had passed naturally. I think they had been in one piece and were broken in passage, as he said he tried to help it out by pinching his urethra. One fragment was 39 mm. long and 5 mm. thick, and the other 34 mm. long and about the same thickness.

I think this case is quite unusual, both in the method of the cause of the injury as well as in the passage of such a large foreign body without assistance.

HUGH JAMESON.

Titusville, Pa.

Well! Wouldn't that flabbergast you! What will young fools do next?—ED.

CROTALIN IN TUBERCULOSIS

Dr. R. E. Dean, Three Rivers, Mich., writes: "I commenced giving crotalin to a woman sixty years of age who had been suffering with chills, fever, etc., for about six months. Fever averaging about 102° F., but not continuous. During the use of crotalin this temperature dropped to nearly normal and considerable strength returned. The first twelve injections caused much swelling and pain but after that time they were no more painful than any hypodermic injection. After stopping the use of this drug for several weeks I find the symptoms returning, so am quite convinced that if taken when tuberculosis was in its incipency it would be the most beneficial treatment I have found. The effect is much better when the bowels are thoroughly clean and disinfected."

THE JUICE OF THE PLANTAIN IN TUBERCULOSIS

Dr. J. Montelvo of Brazil, South America, has published an article in which he claims that the juice of the plantain, or the ordinary cooking banana (*musa sapientum*),

works miracles in the cure of tuberculosis. He says that he was called to visit a man in the advanced stages of tuberculosis, with frequent cough, abundant expectoration, night sweats, high fever, extreme emaciation, diarrhea, anorexia. History of tuberculosis in the family

The juice of the plantain was ordered, preference being given to the variety known as San Tomhe, which is the strongest. A large stock of the plant, about fifty centimeters long, was cut daily, and the juice expressed in the sugar-mill, after which it was filtered and kept in bottles. A wine-glassful of this water was taken by the patient every two hours during the day, and after three days of this treatment he was able to walk around; the cough and expectoration soon disappeared, the appetite returned, and it is claimed that after two months of this treatment there was complete convalescence. Other members of the family have also been cured of the disease by the same treatment

The juice cannot be preserved for many days, as it is prone to ferment, thus losing its tonic properties. It is claimed to be useful in gastroenteritis, acute tonsillitis, laryngitis, etc.

CARLOS F. SECORD.

Chichicastenango, Guatamala.

EXPLAIN THIS CASE—SOMEBODY

While attending the meeting of The Ohio Valley Medical Association at Evansville, Ind., I was witness of a remarkable circumstance in the lobby of the Vendome Hotel. After dinner, while talking with a friend, a man somewhat over six feet tall approached the clerk and after a moment's conversation addressed the people who were sitting about, as follows:

"Gentlemen, I propose to give you a unique exhibition, and I have no accessories outside of my own body. I am six feet two inches tall and I shall demonstrate to you that I can make myself grow taller in your presence until I reach the height of seven feet."

This man then made a series of movements, as though forcing himself upwards

from his hips, and the result was that in less than five minutes his height was increased to seven feet, or ten inches more than his normal height. There was no *legerdemain* or optical illusion in this. The cold, hard fact was patent.

The man then assumed his normal condition and gave another illustration of his curious makeup. Standing beside a chair, with his left hand touching it, he placed a boy twelve inches distant from his extended right arm and with some peculiar motions the right hand gradually reached out, without moving the body, until the fingers touched the nose of the boy.

To me this was an interesting as well as an unexplainable exhibition. Perhaps some others who were at the meeting saw the "show" or have seen it elsewhere, and may be able to offer a solution of the problem.

W. T. THACKERAY.

Chicago, Ill.

WHAT EVERY DOCTOR SHOULD HAVE AND WHAT HE SHOULD DO

First of all, the doctor should be the proud possessor of a good, healthy, quick-acting brain, and then have the mechanical training to put in effect the action of its intelligence. If there is any place in the world that needs a quick-acting brain and a mechanical genius it is the country and small country town. Up to the present time these places have been cursed, to a greater or lesser extent, by the nonprofessional quack or the unequipped physician. Many physicians practise for many years in the country and smaller towns in a little, old, dirty, spit-stained office, or without any office at all. This thing should no longer be the case, for it is not only a drawback to the success of the doctor but a dangerous example to set before the layman.

Nowhere, at least here in America, is there a place that has not good mechanics either in wood, stone, brick or concrete. And any doctor who is practising medicine should be able to prepare for himself at least a few things for emergencies. He

should no longer send all his best-paying practice away to the larger cities, to men who are no more competent than himself to perform minor operations. Almost every home now has at least one room that can be made clean and reasonably aseptic, and nurses can be had in almost every remote corner of America, and any doctor can provide himself with a small operating room and equip it very cheaply, so that he can at least take care of all emergency-cases and assure the neighborhood of reasonably good service, as well as making his own hold stronger professionally and financially.

The following is a description of a room prepared by the writer in which he does almost all the operations and with as good success as could be had in the larger hospitals of the metropolitan cities. Only a few days ago he performed a successful appendectomy on a six-year old child. The room is built of brick, plastered inside, with a concrete floor. It is small, only 12 by 14 feet, but well lighted from a skylight, good illumination being the most essential thing for an operating room. The equipment in this room is metal and enamel goods, consisting of an operating table, stool, instrument case, irrigating stand and gasoline sterilizer. This room can be made aseptic and in less time than many of the larger operating rooms of the larger places. The success of surgery greatly depends upon the amount of energy displayed in keeping everything clean.

Any doctor who knows anatomy and has any mechanical genius at all can take care of almost all the surgical work that comes within the range of his practice if he will only cater for it; and I believe, if you pretend to be a doctor, you should be a good one. If not, get out, and let someone else in that will be. Human life is too precious to be trifled with by the man who does not know or will not do.

Any doctor that has read *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* for five years, who is a graduate to start with, and has not come to the front and felt himself competent for the emergencies must be stupid indeed. For this journal has been

a greater revolutionizer of the practice of medicine and its branches than any other publication in the world.

GEO. H. INSCOR.

Holly Grove, Ark.

A TRIBUTE TO MY FAITHFUL CO-WORKERS WITH SPECIAL REFERENCE TO TWO

Every success worth while depends upon cooperation, mutual boost, shoulder to shoulder, and with hearts in harmony to a common end, beginning with a right idea dominant in one mind and evolved through the combined effort of the many, for mutual benefit.

Since this is our annual Progress Number it is peculiarly fitting that I should take this occasion to pay tribute to the co-workers who have done so much to contribute to our success during the busy, teeming years that have passed since I first planted, right here in Ravenswood, the seed of our therapeutic faith, which is so rapidly growing up into a mighty tree—yes, a very forest of achievement.

There are many of these helpers still with me, all dear to my heart, some of them with me for years, to all of whom I should like to allude by name. But space and time forbid. Yet time is passing, other partings like those recorded here may come, similar occasions for the just word of praise, but not I hope for many years. These dear helpers who have been with me and striven and fought by my side are drawn to me by stronger ties than those usually holding together employer and employee; they are all my friends, and our association is not one which can be or shall be lightly broken. I am with them, work with them, every day. They know!

In previous pages of this issue I have given special prominence to the life and work of dear Father Epstein, who has contributed so much to making the CLINIC (I still cling to the good old name—it was my first love) what it is. In this place I want to say something about two sisters, Emily and Ida Richter, both of whom have recently left our service

to enter different fields, and who, at the time they left outranked in years of service all other employees. Many of our visiting friends have met and doubtless will recall them both.

Emily Richter, with one exception, was my very first helper, and Ida began to work for "The Doctor" the following year. Yet both are still young women, in the very prime of life, which shows with what tremendous speed and inherent vitality this work of ours has taken form and attained to full manhood-growth.

With me, from the very beginning, as shown in the little picture of my first helper-bunch, the influence these two young women have had on the build-up of this business, its forms, its methods and the personnel of its growing employed force can only be appreciated by those who know because they themselves are part of it. One in himself is but little, yet the force of example and uplift association is great, and good work goes on and on to end only with time and limited only by opportunity—the leaven that leavens the whole lump.

When Emily came I was a young doctor, practising medicine here in Ravenswood, a Chicago suburb. I had tried the alkaloids in my own practice, and liking them better the more I used them I wanted to help other physicians, first by supplying them with remedies that could be depended upon, second, by disseminating practical ideas concerning their use. It was this feeling which led to the establishment of this journal.

I was very busy with my professional work, and for some time the manufacture of the active-principles was only a "side issue." There wasn't enough in it to keep even one girl busy all the time, so that when Emily got out of work I sent her outside, all along the North Shore, to do practice-collecting for me, which ground she later covered for a time, introducing the alkaloids—telling the doctors of our infant work—and doing it well. This state of things didn't last long. The time soon came when I had to have other helpers, even a stenographer and typewriter. (At first all the correspondence was done—late at night—with my own

fist.), and then Ida came into the business, during its second year.

It wasn't long before expansion commenced, and at a tremendous rate. I started THE CLINIC, which was a success from the very start. More helpers came in. Some (most) staid with me—many are still here—and some stepped aside, most of the girls, into the broad highway of matrimony.



The first picture of my first little "bunch", taken on the rear steps of my house, where, in my rear office and in an open attic, the business was then conducted. Emily and Ida at the top.

Ida and Emily staid on the job. As the business grew they grew with it. They knew the details (most of which they themselves had helped formulate) even better than I did myself. Willing to do anything that would boost, as needed in every success, they put their very hearts into our work and helped, with all their strength and unusual abilities, to make it what it now is and to shape it for what it is going to be.

Naturally they *grew*, growing, in the most natural way possible, into important positions; Emily into charge of the order department, with its great details; Ida, of the typewriting and stenographic force, now numbering over fifty workers which, trained under her careful supervision, it would be hard to beat. The latter also served as my own private secretary, and as such attained a familiarity with the inside workings of the business, which has proven invaluable to me. She is a natural business woman; careful and conservative; absolutely uninfluenced by the showy externals which too often lead us astray; full of "nerve"—genuine ability—and having business judgment second to none. The same is true of Emily.

About two years ago Emily made up her mind to become a missionary. This was not any sudden decision, born of a temporary emotionalism. It was the expression of a long-felt desire for a larger service to others. She took a course in missionary training in this city, still devoting what time she could spare to our business; then, about a year ago, she went to Armenia. She was stationed at Hadjin, a name which many of you will recall—all who followed the newspapers during the late terrible Armenian massacre.

It so happened that when this terrible outbreak occurred Emily was in attendance upon a missionary conference at Adana, in the very heart of the district where some 15,000 to 20,000 Armenians lost their lives. Two of the Hadjin missionaries, also in Adana at the time, were killed. Every day, with all its hard work and sacrifice, was a day of agony, which they expected might be their last; but we know that Emily, like many other of these brave young men and women, would not and did not lose her nerve. Instead of thinking of themselves they thought of the thousands of bereaved and suffering needing their care—what they could do for them.

Nor did Ida, here with us, lose nerve. For weeks we got no word from Emily. We scanned the newspapers every morning with fear. Ida, however, throughout expressed perfect confidence, with deep Christian faith, that her sister would come through all right—and she did.

For several years Ida has been planning to go west and build a little home of her own, a pretty bungalow on an acre or two of land, in sight of Mount Ranier. She has near relatives at Seattle, a brother, a sister, and a nephew (The whole family is *right*.) who is in charge of our Northwest Branch. Naturally she wished to be near them. During our fight of the last two years I urged her to stay with me, it being almost impossible to spare her; but now that we are "out of the woods" with a clear road before us, she felt that we could and really must let her go, so finally I reluctantly consented, and she had her way—as usual.

When the date was set for her departure, some of my girls came to me with the plans for a good-bye surprise-dinner. Everything was "framed up," and all they wanted from me was my approval and my presence. They got both. The dinner came off as

the outdoor garb and hurry off to home or pleasure. I doubt if Miss Richter ever heard the bell—her work ended when there was no more work she could do."

Dr. Burdick said: "She has personally trained many young men and young women



IDA RICHTER



EMILY RICHTER

scheduled on the evening of November 13, and later in the evening the whole party "took in" a Thomas orchestra concert. About thirty of our oldest and most trusted employees and associates were present. We had a royal good time, giving Miss Richter the best "send off" that we knew how. "Yours truly" presided and after-dinner speeches were made by Drs. Waugh, Burdick, Thackeray and Butler, to which Miss Richter responded. We can only quote here and there a sentence from these speeches:

Dr. Waugh said: "Nobody had more fully at heart the interests of the Company; nobody as completely understood the business down to the last detail. Her influence was always exerted for the good of the business, never for her own. Others might await the sound of the closing bell, to drop their work and hasten to don

(and I am proud to be counted one of them) to do their every duty to the minutest detail, forgetting nothing, slighting nothing, sparing no pains. And for this reason I consider her perhaps the strongest force for the organization of business detail which we have ever had in our establishment, outside of the Doctor himself. The best legacy which she leaves behind is this organized force of bright young business people, carefully trained, earnest and conscientious—a powerful constructive force."

"Mr. Clough said to me one day: 'Don't you know that it is a great business education to work for Dr. Abbott?' I agreed. It is. From the Doctor we get the inspiration, the enthusiasm, the optimism, to make our enterprise, as we hope and believe, eventually the greatest power in medicinal therapeutics in this or any other country.

We have also been getting, thanks also to Miss Richter, an education in the technics of business without which all this enthusiasm and hopefulness is but a *common ordinary noise*, just 'sounding brass and tinkling cymbals.'"

Dr. Thackeray said: "In Miss Ida Richter is embodied unswerving loyalty to the heart's core, and with the courage of her convictions she has, for lo! these many years, made her position known and felt, not only by Dr. Abbott, but by every member of his staff, nor has this been done arrogantly, but in such a convincing manner that we have learned to respect her judgment and to esteem and admire her personality."

Dr. Butler said: "We all know you so well that it seems unnecessary to wish you happiness and success in your new home, when by all God's rules of life we know that success and happiness are sure to be yours. Yet I imagine that now and then, in the quiet twilight, you will think of those days which were woven into weeks of joyful labor for Doctor Abbott and the weeks rolled into harvest months of triumph and the months bound into fifteen golden sheaves of years.

"In my mind's eye I can see you in your western home surrounded by flowers—and Angora cats sitting on your porch—

"When the silvery lances of twilight fall
And the roses tangled around her sill,
And over the rustic garden wall,
The jasmines shine and the jasmines spill.

"Where the birds are winging and warbling up,
Out of the golden western air,
Lily to lily waves its cup
And drinks of dew to the roses rare.

"Where rain drops ripple from turf and tree
And quiver and quiver with hearts of fire,
And daintily over the leaf and lea
The zephyrs hang with sweet desire."

Miss Richter, though taken totally by surprise, responded in part as follows: "I want to say that if I have had any success

at all, if there is any secret to my success, it lies in this: I love my work. I have always loved it, and the people I have worked for and with. I have had a little motto posted on my desk for a long time (I cut it



DR. JAMES L. NEAVE

out of a gardening magazine, by the way) which I think is very applicable:

"To business that we love we rise betimes
"And go to't with delight."

"That is the way I have always felt when I have gone to work. I have never disliked it, I have never dreaded Monday mornings. I can truly say, from my heart, that I have loved my work, and have felt in doing it that it was not the ordinary work of the ordinary manufacturer, but that I was having a small part in something that was for the uplift of mankind.

"It is not because I do not love my work that I am leaving it, but I do not wish to stay in business until I have no more ambition left, until I can no longer enjoy it or anything

else. I do not feel that way now, but of course I would reach that point in time, and so I want to leave while I can still enjoy life.

"I have always loved nature and animals, and I am glad I am going where I can have the glorious mountains all about me, and my flowers and bird and cat and dog. I have always wanted an 'all-my-own' dog, and now I am going to have one. In the West I shall always live in God's out of doors.

"After hearing here tonight your loving words I am almost sorry I am going away, and I want you all to know how sorry I am to leave you."

There is much that I might say, much that I should love to say, of appreciation and praise of the splendid, loyal work of these noble young women, but they know that it is all in my heart, and cannot be made stronger by the mere saying of it. So I will close with the toast proposed by Dr. Burdick:

"Here's to Ida! May her prunes grow as big as apples and her apples as big as pumpkins, and all sell as well as Abbott's Saline Laxative; may the roses bloom all the year 'round, on her cheeks as well as in her garden; may her chickens all lay double-yelled eggs, and two or three a day each; may her Persian cats become as numerous as the army that crossed the Hellespont, and come to a less untimely and more profitable end; may the sun of prosperity, and love, and happiness shine upon her garden spot and in her heart for ah! these many, many years! Here's to Ida—and Emily too—God bless them both!"

W. C. ABBOTT.

Chicago, Ill.

DR. JAMES L. NEAVE

Those who have read Dr. Neave's articles on Indian life, published in this and the pre-



The home of Dr. E. M. Ritter, Williamsport, Pa.

ceding issue of CLINICAL MEDICINE, will be interested in looking at Dr. Neave's face, shown on page 90. The picture should have appeared with the article, but it reached us a little too late.

I GIVE TRIBUTE

The long-treasured pictures, next pages, are of the beautiful prairie home and family now broken by the passing to the "Great Beyond" of the good wife of the "original alkaloidist" of the great little big state of Oklahoma, Dr. E. D. Easter. This home is a place where love prevails and good medicine is practised.

It was my personal good fortune, some years ago, shortly after the opening of the "new strip," to be privileged to recuperate here for a few weeks, marking an occasion of personal pleasure and physical uplift never to be forgotten.

I wonder if the good doctor still remembers the four cases of pneumonia we found that cold morning in early spring away out in a poor "sooner's" cabin, with dirt floor and only one bed—a mother in "the bed" with a few-days-old baby, a year-and-a-half-old on a box-bunk in the corner and two others on old chairs set face to the wall in the "lean-to" outside.

Our visit was the doctor's first call. There was no question about the diagnosis.



Dr. E. D. Easter, his wife and daughter

They were all severe, well-developed cases, doubles and singles, in the congestive hepatisation stage.

Fear said "grave-yard." Judgment was inclined to "back," but alkaloidal enthusiasm (we had been talking it all the week) encouraged Hope to say, "No! we'll knock 'em out;" and with the dosimetric trinity, the defervescent compound, the intestinal antiseptics, calomel and the saline flush we did it, carrying every one to complete recovery.

Dr. Easter knew how to abort (modify and shorten) pneumonia. He had been doing it for years. He's been doing it ever since—one of the great and rapidly-growing army of optimistic, resourceful country therapists, made so through success, and who, practising get-there medicine, positive-therapeutics—*know* what can be done for pneumonia, for typhoid "and what not," *because they are doing it every day for themselves*.

"I do not understand," says Dr. Easter, "how an intelligent physician who wants and means to practise up-to-date medicine

can even try to get along without the alkaloids. I should surely tie up my "pill bags" and quit the business if I had to use again the old-style drugs."

Who is "authority?" The man who knows and knows he knows because he has done things at the bedside, not once, but many times. I haven't seen Dr. Easter since. I have heard from him but rarely and not for a long time. Here's his last letter.

"I must say for true knowledge the January CLINIC [1909. This is a year old.—W. C. A.] is a hummer.

"Keep a grinding! you are coming to the front. Yes, I am using the alkaloids and nothing else to speak of. The home you see in the picture I am sending you was paid for by the use of the alkaloids.

"I have just got through with a case of pneumonia treated strictly according to alkaloidal methods—was called the day after the initial chill and discharged the case, up and doing, the ninth day. The family prepared for a three weeks siege, as they knew what pneumonia was. When I told them the case would not last ten days they talked



The beautiful home of Dr. E. D. Easter down in Oklahoma

of discharging me and getting another doctor. So you see how the world runs away.

"By the way I did not mean to keep you waiting so long but had to wait on the pictures to have them finished.

"Now, if you will run down some night we will have fresh eggs and sausage 'like mother used to make' and a general good time. Wishing you the best of success I am, and are we all, yours very truly. How goes it now, Brother? Tell us about it.

E. D. EASTER.

Pond Creek, Oklahoma.

{And in *THE CLINIC*, *Helpful Hints* and in my daily work I answer, with records of deeds done and of things doing, "Going Some!" With all these good friends how could it be otherwise? Why is it that such a vast majority of our best therapists, those who are getting best results and have a correspondingly greater faith in drug therapy and themselves, are in the ranks of the dispensing doctors—those who buy what they want and use it according to the dictates of their own experience. It doesn't

need to be so; but speaking "by the book" it surely is, and—"there's a reason."—W.C.A.]

PICTURES OF FRIENDS AND THEIR HOMES

In this number of *CLINICAL MEDICINE* we show the pictures of several of our friends and of where they live. From some of them we print a few words, telling of themselves and their work; others prefer to keep silence—in print.

These pictures are evidently enjoyed by members of the "family," though once in a while some one writes in that we are giving too much space to them. As for ourselves, we are glad to get them. We especially enjoy pictures showing odd conditions and peculiar circumstances in medical practice. Can you, Doctor, not think of something about your own work that would make a nice picture, and which others would enjoy looking at.

Are you lodged in a log house or a tent? Have you a peculiar conveyance for getting among your patients? Is your home in the

desert or on a mountain side? Are your patients cowboys or Chinamen? Get out your kodak and send us the results.

THE DOSE RULE FOR ADMINISTERING ACONITINE

Frequent inquiries have been received from the readers of *CLINICAL MEDICINE* in regard to the rule outlined by me for giving alkaloidal granules of aconitine to children. We take the opportunity to explain this more fully, and at the same time discuss its relative application in connection with other alkaloidal granules. In other words, may the aconitine dose rule be applied to all other alkaloidal granules?



DR. J. M. SHALLER

The dose rule for aconitine is to dissolve one granule for each year of the child's age, with one additional granule, in twenty-four teaspoonfuls of water. For infants under one year, one granule in 24 teaspoonfuls of water is the dose. Dose, one teaspoonful every fifteen minutes, every half hour, or every hour, according to the degree of fever and the sthenic condition of the patient. The higher the fever and the more sthenic the condition, the more decided is the indication for the use of aconitine. The following case led to formulating this rule:

The patient was an infant, four days old, with a normal condition of the bowels; it had a temperature of 104° F. The diagnosis was not positive, but fever was probably of hepatic origin. This was among the first instances in which the writer used aconitine. The prejudices and teaching of that time (about twenty years ago) against aconitine produced a feeling of hesitancy in regard to its use and its dose, especially in regard to infants. Aconitine was indicated. It is possible to discover a correct, harmless and helpful dose of any medicine, of even a poison. In the case of this infant, one granule of aconitine (Abbott), gr. 1-134, was dissolved in twenty-four teaspoonfuls of water and one teaspoonful of this solution was given every hour until the most prominent symptoms manifest the signs of improvement.

The patient lived a number of miles from the city, and it must be confessed that there was considerable uneasiness felt as to possible evil results. This anxiety grew and magnified itself sufficiently to disturb all peace of mind. As early as possible the next morning, the patient was revisited. A sigh of relief escaped me on finding that the now-five-day infant was not dead. Several more very happy sighs followed when investigation revealed a decided improvement, which continued until recovery was complete.

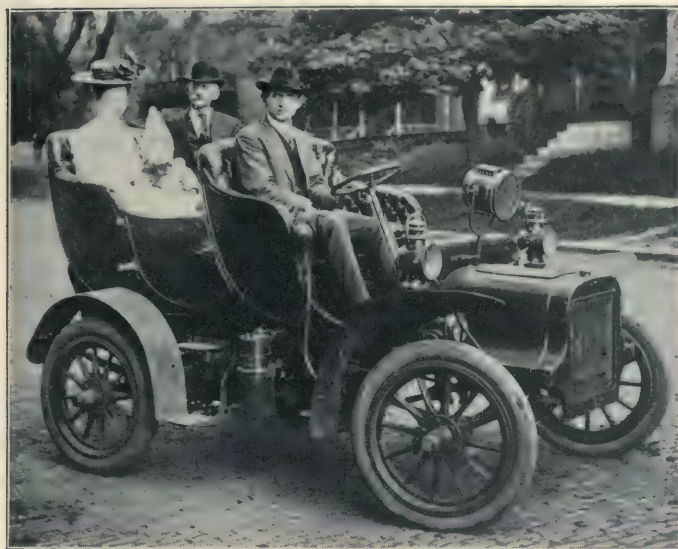
This one case led to the following soliloquy: If aconitine is a good remedy to administer in acute inflammatory conditions, some safe rule should be formulated. The remedy must be made so free from danger that no one need worry about evil consequences, even when giving it to the youngest infant.

After numerous trials in many different acute febrile conditions, the rule, known as "Shaller's rule," was finally evolved. It has stood the test of twenty years, and has been used by thousands of physicians, without bad effects following. The dose seems small but the results are satisfactory, for fever is soon reduced and if given in the early stages of acute pneumonia, bronchitis or pharyngitis, the disease is frequently aborted within the first twenty-four hours of treatment.

Because of the ease with which the dose for children can be regulated, it is unfortunate that the aconitine dosage rule cannot be applied to all the alkaloidal granules.

In regard to codeine, however, a very happy and safe combination is Waugh's anodyne. Atropine is rarely needed in frequently repeated doses, and hyoscyamine is not often prescribed.

Morphine is often unsafe and codeine may well replace it in children, and in adults as well. Strychnine arsenate, grain 1-134, would be harmless used according to the aconitine rule. The other important, and very necessary and frequently used granules are emetine, calcium sulphide and calcium iodized, which are not poisonous. Digitalin and apomorphine require larger doses. Even aconitine needs to be given in larger doses to robust children with very active fevers. Aconitine is contraindicated



Dr. T. C. Buxton of Decatur, Ill., coroner of Macon county

While it is safe, it is not as effective because the dose would be too small. Yet, when it is considered that aconitine is the most important of all the alkaloids used in the treatment of children's diseases, regrets are not so necessary.

Then again, with the exception of atropine, codeine, strychnine and hyoscyamine, there are very few granules in daily use that are strongly poisonous. The rule is safe even if applied to these granules, viz.,

hyoscyamine, 1-250 grain, atropine 1-500 grain, codeine 1-67 grain, strychnine 1-134 grain, but the dose will often need to be increased: *To effect is the only guide.*

where the skin is pale and the pulse is feeble.

The dose according to the aconitine rule



The home of Dr. T. C. Buxton at Decatur—the nineteenth house that he has built

is safe to start with, and can easily be increased by giving the solution more frequently until improvement is manifest or until physiological symptoms are produced. Then



Dr. L. C. Oyster, Lumberport, W. Va.

the remedy may be gradually or completely withdrawn. If a remedy is indicated in serious cases, push it until some change for the better is manifest—dose enough. This can safely be done with aconitine, particularly, in the early stages of acute inflammatory or in zymotic diseases; but after forty-eight hours, however, its results are not so brilliant as when used at the outset of diseases.

If aconitine or any other medicine produces vomiting or stomachic pains, when these are not intended, the dose is too large for that patient, or not sufficiently diluted. The amount should be decreased and then diluted or entirely withdrawn.

There should be no more hesitancy in the use of the standard aconitine granule than in that of any other medicine, toxic in large

doses. Physicians should have full knowledge regarding diseases and of the harmful properties of remedies, as well as of their beneficial ones.

Confidence in one's ability, established on knowledge, together with strong, hopeful and positive assurance of the patient's recovery, conveyed to the patient and the friends, are what make for success.

J. M. SHALLER

Denver, Col.

THE COSMIC URGE

Although I am no writer, I can not contain myself after receiving and reading *Helpful Hints for the Busy Doctor*. I am a constant reader of *CLINICAL MEDICINE* and think it one of the grandest medical journals published and am satisfied this new adjunct before me will also add laurels to your crown.

To begin with, I am an eclectic, an "irregular," if you please, or any other old name you wish to style me; but I have a diploma and state license just like any other doctor and am "regular" in my habits, especially of curing my pneumonia patients.



Dr. Oyster's beautiful home

And what is best of all, I've got a clear, "regular" conscience and am glad that I am a doctor and can cure sick folks, with medicine too, nihilists to the contrary notwithstanding.

If I believed what some of the authorities claim to believe as to the treatment of disease, I should go to plowing corn for bread rather than go on cheating and swindling any poor sufferer out of his hard-earned savings. I'd just let him keep them for funeral expenses.

Dr. Abbott, God bless you! To my mind you have directly and indirectly saved more lives from a premature grave than any man, dead or living. Push the good work. Bright will be your reward here below and star-bedecked will be your crown above.

After reading the articles of your convert, Dr. Servoss of Nevada, page 4, and of Dr. Graves, eclectic physician of Chicago, page 5 of *Helpful Hints No. 1*, and many of your editorials in previous numbers of *CLINICAL MEDICINE*, it seems a wonder to me that we still have men who will stand up before the public, calling themselves healers of men, and claim that pneumonia is a self-limited disease which cannot be cured or aborted by drugs rightly used and proper supplemental measures thoroughly applied. For my part I don't feel that awful dread (well known to all physicians when they come in contact with a hopeless case) that my skeptic "regular brother" does, nor should he feel it if he knows that his treatment—the very thing he was sent for to do (give medicine)—would do no good. When I go to my pneumonia patients I go with confidence, "nerve" if you please, knowing, barring accidents, that my patient is sure to get well. He does. I have a clear conscience when the man pays his bill—if he does.

I hope, Dr. Abbott, that you will continue to pour hot shot into the camp of the enemy. I never saw a man more suited for the fight in natural as well as acquired gifts than you. You're a straight hitter; "keep a hitting."

Pardon all this random talk. I'm a "country doctor;" dispense my own medicine; use Lloyd's specifics principally and get positive and definite results. I like the alkaloids and use some of them and should use more if I hadn't got used to Lloyd's line. Positive results are what I am after and they can be had from Lloyd's specifics or your alkaloids.

Doctor, whisper to your "regular" friends that pneumonia is not the only thing we "irregular" men can cure, and that with medicine, too. Thanks for *Helpful Hints*, continue to send it. It's chock full of good helpful things.

P. McDONALD.

Bolton, Ga.

[Well, what do you think of that! He said it and—I wonder if it isn't more than half true. Our good brother is an enthusiast; but nothing worth while is accomplished without enthusiasm and hard work.—ED.]

UNDIAGNOSED CASE TREATED SYMPTOMATICALLY

A few days ago I was called to a neighboring ranch to see a woman who had been taken sick the previous evening. The messenger told me that the patient complained of pains in her head, back and extremities, accompanied by diarrhea. On reaching my destination I found the woman suffering severe pains in her back and extremities, and some headache.

The woman said she had felt well till 9 o'clock on the previous evening, when she experienced a slight chill followed by the pains mentioned, and that shortly after that her bowels became active, with some slight abdominal pain. The discharges were offensive. Her temperature was 102.5° F., pulse 104, and her tongue was quite heavily coated and breath foul. There was no tenderness on palpation of the abdomen and no appreciable tympanites. She was the mother of a year-old girl, still nursing, and gave a history of eating frequently and in considerable quantity in order that she might have sufficient milk for her child. The bowel passages at first carried some undigested food and there was more or less intestinal irritation.

The symptoms and history pointed toward intestinal irritation with general toxemia. Acting upon this theory, I administered calomel and podophyllin, each 1-6 grain, for six doses at half-hourly intervals; and to act as a febrifuge and to combat the infection,

one granule each of the dosimetric trinity and 1-6 grain calcium sulphide every half hour to effect, and then at less-frequent intervals to sustain such effect. To relieve the diarrhea I gave the following: Zinc sulphocarbolate, grs. 24; copper arsenite, gr. 12-250; water, ozs. 3. One teaspoonful of this mixture was given every two hours.

At 6 o'clock the temperature had dropped to 100° F. and the pulse to 90, while the general pains had subsided to some extent, although the headache was worse. There was some nervousness at this time, and to meet this symptom I administered caffeine valerianate, gr. 1-6, at half-hourly intervals, four doses being followed by sleep. The trinity and calcium sulphide were continued at hourly intervals from 6 till 10 o'clock, and then at two-hour intervals, or when the patient was awake, the rest of the night.

I saw the patient at 8 o'clock the following morning and found the temperature normal, pulse 76, and no pains. The diarrheal discharges had stopped and she was asking for food and wanted to get up. I remained at the ranch until 10:30 a. m., and at that time the conditions remained normal. I ordered the zinc and copper mixture to be continued, leaving capsules containing quinine salicylate, gr. 1-6, and strychnine arsenate, gr. 1-134, one each to be given every two hours, but the interval to be gradually extended to six hours, or three times a day. A report two days later was to the effect that the patient was up and about and feeling quite well. I suggested that the baby be weaned, that the mother confine herself to meals at regular hours and that she lessen the amount of food consumed.

This was undoubtedly a condition due to autoinfection from an overloaded bowel and the lack of proper elimination. It was also a case that demonstrated the prompt

action of active-principle therapy. It would probably have been better had I cleaned out the bowel with a saline laxative, but in my hurry to get away I overlooked the fact that I had removed my can of saline laxative from my satchel; still, the calomel and podophyllin acted very effectually in clearing out the intestine. The discharges were odorless when passed in the morning and not as frequent, and there was no abdominal pain.

In this case the symptoms were met as they appeared and with the remedies deemed proper under the circumstances, and instead of a very sick woman of the afternoon before, I left one who was laughing and



Home of Dr. A. A. Witham, Paisley, Ore.

joking and finding fault with me because I would not let her get up for breakfast.

This is one of the many cases coming under my observation in which the active principles, administered as indicated, have resulted favorably within a very short time. The primary symptoms in this case might have pointed to various specific conditions, but as this woman had not been subject to any specific infection, the case resolved itself into treating the present symptoms and withholding any specific diagnosis other than one of toxemia due probably to the causes noted above, and the results were such as to sustain such a diagnosis.

While it is probable that results might have been obtained by the use of other agents, my experience has been that the

active principles give results with greater promptness and that I have a greater assurance of their effect.

GEORGE L. SERVOS.

Fairview, Nev.

EIGHTY-SEVEN CASES OF TYPHOID FEVER?

With great pleasure I now take the opportunity to let you know what the sulphocarbolates have done for me in treating 87 cases of typhoid fever.

We have had an epidemic of typhoid over here in Marjion during the last fall and 87 of these cases I had to treat; but many of them I was not called to see until too late so I lost three cases out of the 87. I think if I could have given them the sulphocarbolates from the start, as I did all my other cases, none would have died.

The beginning of the epidemic was in this way. There was first a case of typhoid in a house on a hill, sloping toward the water supply of the town, which was near. The dejections were thrown out in the garden and when the rain fell the water ran from that garden immediately into the natural channels of the water. Three weeks later the epidemic began. I have had among the 87 cases some very interesting ones to describe.

Male, age 16. I called to see him three days after the fever started; found temperature 38°C , evening. The patient complained of severe headache; gave monosyllabic and incomplete answers to all my questions. The tongue was characteristic. Bowels constipated. Next morning I called again to see him and found the temperature 38°F . He was lying in a state of stupor but every now and then you could hear him shrieking from groundless fears.

On the evening of the same day I was called in a hurry to see him again; found the temperature again 38°C . but he was in a state of insanity. Sometimes he threw his head against the walls, at other times sleeping, "upside down;" eyes open wide but could not

see. Three men were holding him to make him lie down in bed.

The first time I saw him I gave him 10 grains of calomel in two doses, three hours apart. After the calomel I gave a solution of saline laxative, then the sodium sulphocarbolate, 10 grains every two hours. And when I found him in that state of "*febris nervosa versatilla*." I gave him with the sulphocarbolate the tincture of veratrum viride, 2 minims every three hours. On the third day



Home of Dr. G. A. Rowe, Stockbridge, Mich.

after starting treatment he was improving, and on the eleventh day from the beginning of the fever he was feeling very comfortable, and so the case was discharged.

Among these cases, I have had four of intestinal hemorrhage. In one case over three pints of blood passed with the stools. Three of those patients were well within two weeks. The fourth did not take any medicine. Neither was she restricted to any special diet, so she wasted and died with cancrum oris at the end.

For the hemorrhage I used atropine and ergot and I am glad to say I could control the hemorrhage every time. Although genuine acute hemorrhagic nephritis is a very rare complication yet I have one such case among the 87. The acute nephritis was the predominant symptom at the start, while at a later period in the course of the fever the intestinal symptoms, the rose spots, etc., showed the disease to be typhoid fever. It was probably the result of that slight parenchy-

matous degeneration of the kidneys which occurs in typhoid as in most of the severe infectious diseases. Most likely the renal epithelium was injured by the noxious products which have been formed in the body and excreted by the kidney. The amount of urine was diminished, its color was very dark, and its specific gravity greatly increased.

In one case I noticed a marked irregularity of the pulse in the acme. I was afraid it was a grave symptom but fortunately it passed off. The patient recovered within three weeks.

Edema of the ankles and legs during convalescence I saw in four cases due to heart weakness, but it passed off in one week.

Periostitis of the tibia I have seen in one case during convalescence and in another swelling of the knee-joint, both of which are very rare complications but the cases came out all right at the end.

I see very many cases of general dropsy over here, the cause being enlarged spleen and liver due to malaria. I use for such cases quinine and anasarcin and am very glad to say the results are always satisfactory. In anasarca due to a heart lesion anasarcin always gave good results. As to nuclein I have had a good many opportunities to use it mostly hypodermatically and I can say positively that it is excellent in debility and anemia and any case of lowered vitality.

I have a case of chronic appendicitis; the patient had over twenty attacks within two years. I have used for the attacks hypodermics of morphine with a laxative and the sulphocarbolates by the mouth. The patient will not submit to an operation. Can you advise anything to prevent the recurrence of the attacks?

AMIN YUSUF.

Marjion, Beirut, Syria.

[Considering the character of Dr. Yusuf's clientele and the conditions under which they live, his results certainly seem remarkable—too good to be explained by any other hypothesis than that of correct treatment intelligently applied. The best treatment for

the case of chronic appendicitis is removal of the appendix. "Lay down the law" to that patient.—ED.]

ESTIVOAUTUMNAL FEVER

This is a continuous form of malarial fever, characterized by irregular intermissions or remissions.

The causative agent is the estivoautumnal type of malarial parasite. This parasite has no definite or fixed time of sporulation (swarming) this occurring at all hours, giving a continuous fever, the cycle of development being indefinite.

Symptoms.—At times there are chilly sensations at the onset. Usually the fever is the first symptom noticed and it is continuous. If remissions occur they are irregular; there may be an abatement of fever one morning and at the same time the next morning the temperature will be at its highest point.

The bowels are usually constipated throughout the disease. All the abdominal symptoms observed in typhoid fever are absent. The spleen is usually enlarged and tender, and the same may be said of the liver. The skin is muddy and pale yellowish. Vomiting is not uncommon. The tongue is coated, at first white, gradually getting darker. The pulse runs about 100 to the minute, temperature 102° or 103°F. The skin is dry, hot and harsh. Headache is almost always constant. Urine scanty red; high specific gravity.

Diagnosis.—Differentiate from other types of malaria by the absence of regular remissions; from typhoid and typhoid malaria by absence of all bowel lesions. A positive diagnosis may be made by observing the peculiar estivoautumnal parasite in the blood, and by the absence of other known types of parasites.

Treatment.—In the treatment of this disease the practitioner should ever keep in view the peculiar biology of the parasite. While quinine is the deadly enemy of all the malarial parasites, it has little or no effect so long as the parasites are imbedded in the red corpuscles; but it immediately destroys them as soon as the corpuscle breaks down and

the germs enter the blood plasma. As in this form of malaria the parasite has no fixed time to sporulate, each parasite having its own cycle of development, the rational mode of treatment is to keep the blood saturated with quinine for many days, so that each parasite may come to its death when it completes its development and enters the blood plasma.

The order of treatment would then be calomel, in 5- to 8-grain doses every two hours until the bowels are moving freely, and then quinine in 5- to 10-grain doses every three hours, continuously.

Other remedies may be used as symptoms may suggest.

If headache is severe, acentailid will relieve the pain, reduce the fever and produce a nice perspiration.

Nervous symptoms of the convulsive type call for bromides.

In weak heart the indications are for strychnine, strophanthin and digitalin.

If the skin is hot and dry and temperature high, cold water should be injected into the lower bowel in large quantities.

If the urine is high in specific gravity and scanty, demulcent drinks and diuretics should be given.

Treat all the symptoms as they arise, but *at all times and under all circumstances keep up the quinine until the last parasite has been destroyed.*

The fever will run a week or ten days or, in other words, it will take a week or ten days to poison all the parasites in the blood.

Intestinal antiseptics should be used from the first with the quinine, as the fever may be prolonged by autoinfection or intestinal sepsis. In case the disease turns out to be typhoid fever (the differential diagnosis without the microscope is not always easy) a good beginning will have been made. The fever usually disappears by lysis, with profuse perspiration.

Allow the patients all the cold water they want, within the bounds of reason. It will be found that if the water is not too cold it will give more relief than water as cold as ice can make it. Exceedingly cold water

often irritates the stomach, producing cramps and other unpleasant symptoms.

No solid food should be allowed during the fever or during the first week of convalescence.



Home of Dr. J. H. Lall, Anderson, Ind.

Iron and arsenic tonics are usually indicated during recovery.

WEDEN SMITH.

Jonesville, La.

[I am glad that Dr. Smith gave such proper emphasis to the importance of keeping the alimentary canal sterile, or as nearly sterile as possible. This is a point which is not borne down upon nearly as strongly as it should be. The denizens of our southern states have learned by experience that a "dose of calomel" produces a marked amelioration of symptoms, probably in part because of the antiseptic effect of this drug (the removal of the putrid mass is, of course, of main importance), but they sadly overdo the use of this purgative. The small repeated dose, associated with hepatic stimulants and followed by regulation with the saline laxative, a sepsis maintained with the sulphocarbolates, acts much more nicely.

I cannot abstain from calling attention again to two salts of quinine which are not

used as much as they should be in malaria—the hydroferrocyanide and the arsenate. The former is active in much smaller doses during many of the acute forms; the latter is the preparation to be used during convalescence, when a slight maintenance of quinine action should be supplemented with arsenic.

Allusion has been made to the difficulty that sometimes occurs of differentiating this form of malaria from typhoid fever. This is where the scientific laboratory comes in. The making and sending of a blood smear to a properly equipped institution (if you are not fixed to do this work at home) is simplicity itself; and through the information gained you may get a whole flood of light which will make the hard cases easy indeed.

Also—read the articles on “Malaria” in the Postgraduate lessons this month.—ED.]

COLLECTANEA JACOBI

It is keeping well within the facts to say that few men of modern times have contributed more to the well-being of the race than Dr. Abraham Jacobi of New York. The scope of his labors, extending over a period of almost sixty years, is surprisingly disclosed in the eight volumes of his collected writings, carefully and appreciatively edited by Dr. William J. Robinson, and just issued from the press of The Critic and Guide Company, of Mount Morris Park, West, New York City. The earliest of these writings dates back almost a half century; the latest come forward to June, 1909.

“I know of no other man, either among the living or those who have passed on,” says Dr. Robinson in his preface, “who in our country has had such an important influence on the development of medicine in all its phases.” Dr. Robinson might easily have omitted this geographical boundary, for, as he says farther on, the influence has been wholly for the good, not only of the profession but of humanity itself. It is inspiring to contemplate a life-work so selfless and so thorough as to touch the very farthest edges of the whole domain of human life;

and the contemplation is not only inspiring, it is fascinating. These eight volumes have power to confer a liberal education upon a novice in medicine and to illuminate where education has already been conferred. No man, whether physician or layman, can read them with anything less than continuity of interest or without acquiring profit of a very high order; not because the writings are consecutive, but because they are informed fully with perfect candor, a fine and sincere sympathy, and a wisdom both profound and calm.

In and outside of the medical profession there has been a tendency to regard Dr. Jacobi as a specialist in pediatrics. This error is perhaps accounted for in the thoroughness of Dr. Jacobi's pursuit of the etiology of infantile diseases; but its injustice stands declared in this collection of his works, and his starting point is made clear. He states it with apparent unconsciousness in his remarkable chapter on “Brains, Crime and Capital Punishment,” when he says that “while man experiences many things which shape his nature and fate after he is born, so there are as many while he is being born, and still more before he is born.” He expressly excludes pediatrics from the list of specialties in the common acceptation of the term, but marks their importance as dealing with “the entire organism at the very period which presents the most interesting features to the student of biology and medicine,” infancy and childhood being the links between conception and death, between the fetus and the adult. From this he works out as a practitioner and a teacher, through all these stages, the broadest application of medical art. He is not, nor has he ever been, a specialist, excepting in the extraordinary range of his knowledge, and his lucid power as a transmitter of that knowledge to others.

If Dr. Jacobi's life history were to be written, it would be found a history of the development of medicine during these last sixty years. That term has included an almost complete revolution, to which, in the fullest sense, no one man has contributed more aid and energy. This he has done not so much by original discovery as by the

untiring advancement of practice upon the highest and most beneficent plane. He is a diffuser of light rather than a fire-bringer, but in that office he stands supreme. As such, it would be well-nigh impossible to overestimate the benefit his work has bestowed upon the world.

His mental attitude toward new things may be described as like Bishop Berkley's, in that he views them with impartial eyes, weighs them with unfevered hands, dispassionately rejects the unworthy, and assiduously proclaims the true. Or like Paul's, who wished to try all things, and hold fast that which is good.

"My views regarding therapy," he says, "both hygienic and medical, I trust are agreeable to those who live a modern life, without superstitious belief in things because they are old, and without faith in new stuffs merely because they are new."

He believes first of all in "giving the babies a fighting chance against overdone theories and detrimental practices." To this belief, unswervingly served, who can tell how many valuable lives of grown-up men and women are owing? No man could go to his last accounting with a greater credit of merit nobly acquired, with no thought of self-seeking nor of reward beyond the knowledge that he was doing what was to be done, the duty that lay nearest him. In his chapter on "Medicine as a Career" he naively asks, "What does it mean, after all, to enjoy life? The egotism of many has often been self-sacrifice; to that class doctors are apt to belong. It is the "career of thousands." It was and is his own.

Dr. Jacobi took his first degree at the University of Bonn in 1851, his latest at Harvard in 1906. The first was in medicine, the last in laws. Between these two were others at Michigan, Columbia and Yale. He began practice in New York in 1853, a young man rich only in his endowments of mind and heart, in his courage and hope.

His earlier days were hard enough. His first fee came in November of that year, two weeks after he had taken an office in Howard street, on the East side. It was twenty-five cents. Within four years he had become

one of the founders of the German dispensary, where treatment was free; and had fairly begun his long service as a writer and teacher, getting his first lift from Dr. Stephen Smith, who accepted from him and published a series of articles, for the most part on diseases of children.

That year also (1857) he delivered his first lecture. It was to a class of the College of Physicians and Surgeons, and he frankly confesses an attack of stage-fright. Since then his professorships have been many, and he has been made a member of nearly every great medical society in the United States and Europe, the list being long enough to startle one. Europe had an earlier perception of the necessity for special research in the diseases of children. This country never had a children's clinic until Dr. Jacobi established one at the New York Medical College, in 1860, and though this terminated in 1865, when that institution passed out of existence, he followed it with another at the University Medical College, and there has never since been a lapse. It was here Dr. Jacobi first attracted attention abroad and that distinction began to find him.

Very large indeed is the debt owing by pediatrics through his efforts, by neurology and its later corollaries, psychology and phychiatry, to say nothing of therapy in general, sanitation, and surgical science itself.

His editor describes him as one of those who were first to perceive that many diseases had a social-economic basis, and that "if we wanted to do any good we had to improve the economic and sanitary condition of the people. And this he preached at every opportunity—even when his preaching was not welcome." He "perceived the physician's role as something more than that of a sanitarian—a preventer, a critic, a guide. And his guidance has always been a safe and reliable one."

He is a very young old man today, wearing his honors lightly, and is as much as ever absorbed in the love of his whole beneficent work. The "Collectanea" should make him better known to the great public for whom he has labored so devotedly and so long; and doubtless will, for no set of books ostensibly

professional ever was published having a keener interest for all sorts and conditions of intelligent readers.

GEORGE F. BUTLER.

Wilmette, Ill.

[We can add nothing to this splendid testimonial to the work of a truly great man, except the recommendation to every one of our readers to purchase the "Collectanea Jacobi." There are eight large volumes and the price is exceedingly low—only \$15 for the set. There is really more therapeutic matter of a positive, helpful character in these volumes than in any three of the ordinary textbooks on practice. There is hardly a common disease which is not considered, and in every case Dr. Jacobi's comments are illuminating. Send your orders direct to Dr. W. J. Robinson, 12 Mt. Morris Park West, New York City.—ED.]

THAT JOURNAL FOR LAYMEN

Last month I had an editorial in *CLINICAL MEDICINE* in which I outlined a plan for a lay journal of low price, designed to fight the doctor's battles, and combat the horde of healing fads and the encroachments of quackery. I have received a good many letters of approval (every one who wrote thought the idea a good one) and quite a large number pledged subscriptions. But thus far not enough have taken hold of the idea to warrant our going into this greatly needed undertaking. To make such a magazine a success it should start with at least 10,000 subscribers—and considering the proposed extremely low price that number *should* not be hard to obtain.

Under the circumstances I have determined to modify the plan somewhat and have joined forces with several of my most in-

timate associates to produce a little magazine to be known as *The Backbone Monthly*. The subscription price will be 50 cents a year, but there will be a reduction for a number sent in by one person. It is proposed to make it of general interest, inspirational in character, stimulating men and women to clean, optimistic, successful living. It will be openly antidotal to the "no thought." Emmanualistic and similar literature, quietly leading the leader to *trust* in his medical advisers, instead of distrusting him. The plan is outlined more in detail in an editorial, this issue. If you see articles or newspaper items attacking the doctor, or vilifying him, cut them out and send them to us. We want ammunition.

I have also arranged to lend my moral support to another publication working along lines germane to those proposed for the lay journal by ourselves. This magazine is *Health and Happiness*, published by the Dickim Publishing Company, Ravenswood, Chicago. This magazine has aligned itself squarely and boldly on the side of the great organized forces which are striving to serve



Driving outfit of Dr. A. E. Lyday, Penrose, N. C.

mankind, standing with the best in medicine, in law and in the church, not against them. It proposes to tell its readers of the great achievements of the medical profession in the battle for better health, and how right living, *under the guidance of the physician,*

in rational not fad ways, can arrest disease in its incipency and contribute to happiness. I have promised to write a series of articles for *Health and Happiness* myself, to commence in an early number and continue for several months. These will stand behind and support the doctor.

The subscription price of *Health and Happiness* is \$2.00 a year. You should have a copy for your reception-room table and should persuade your patients to subscribe. At least send for a sample copy or a three-months' trial subscription for 50 cents.

To those who have written words of support for the proposed lay journal we want to say, "Thanks!" Will you not come in and help us boost *The Backbone Monthly*?

This thing is a go! Send in your own 50 cents; add several subscriptions for friends—three for a dollar; eighteen for five; forty for ten dollars.

W. C. ABBOTT.

Chicago, Ill.

"FULL OF HELPFUL TEACHINGS"

Your journal is worth more to me than all the other medical journals I take or ever received. Every number is full of helpful teaching, while about all I get out of some of my other journals is to read of the "marriages and deaths," to see whether any more of the boys I ever knew have become victims of either state.

W. H. HARWOOD.

Chasm Falls, N. Y.

A TEXAS DOCTOR AND HIS SADDLE-BAGS

On this page we show the picture of another friend of THE CLINIC, Dr. W. T. Shelton of Pollak, Texas. He is mounted on his saddle-horse, ready to see a patient out of town. In his saddle-bag and pocket-case he carries several hundred kinds of tablets and granules.

The doctor says, that the man who undertakes to carry the old-fashioned fluids and powders often finds out after reaching

his patient that he is in need of some remedy which he just *could not* carry for lack of room, and in many instances the patient is ten or fifteen miles from a drugstore. The advantage of the doctor's being provided with



Dr. W. T. Shelton, Pollak, Texas

his own pocket-pharmacy, large enough to provide for all kinds of emergencies, seems to Dr. Shelton to be very apparent—and we agree with him.

EXPERIENCES WITH FIBROLYSIN, CHROMIUM SULPHATE AND OTHER THINGS

Dr. Shastid asks if I have had any experience with fibrolysin in optic nerve troubles. My experience with this remedy has largely been with an ointment consisting of thiosinamin, grs. 12; petrolatum (white), drs. 2. It has given me good results in opacities of the cornea. Thiosinamin and fibrolysin are practically the same thing.

I was recently treating a woman for stricture of the rectum. I gave her about thirty injections of fibrolysin into the gluteal muscles. The stricture seemed to diminish. She had been obliged before treatment to spend about 45 minutes at stool each time,

suffering terribly with tenesmus. This trouble nearly disappeared; but she left here and had to stop treatment. She was nearly blind in her left eye before the fibrolysin treatment, and declared that her sight was improving the last time I saw her. She never had corneal opacity.

As to chromium sulphate, it is the most wonderful medicine ever discovered. I have treated successfully cases of marked exophthalmic goiter, neurasthenia, many, many cases of migraine, and one case of locomotor ataxia, the last with marvelous results. The tabetic patient could not stand with his eyes closed a half minute, and after the first few days he wouldn't fall if he stood that way any length of time. He can now walk across the yard, turn around quickly and come back, all without special care, a thing that would have been impossible before taking the chromium sulphate. The doctor should get *The Monthly Cyclopaedia and Medical Bulletin* for September, 1908, and read the article carefully. It reads like a fairy story; no one will believe one-hundredth part of it until he has tried it.

The chromium sulphate is nontoxic. I give it as Dr. Kolipinski directs, from 4 to 8 grains after meals and at bedtime. It is very hygroscopic and should always be kept in glass bottles even when put up in tablets or capsules. I tried it in one case of a poor, foolish young man, imbecile from alcohol. His mother told me that he seemed to get some better; but I have lost track of the case. They live some distance from here so it is difficult to keep the boy under observation.

Dr. Bennett, page 1227 (1909), *CLINICAL MEDICINE*, reports a case of "bladder and urinary trouble" treated unsuccessfully with chromium sulphate. Dr. Kolipinski does not recommend it for such cases. He does recommend it in hypertrophy of prostate and says, if cystitis exists to give sandalwood oil. Dr. Kolipinski's list of diseases is certainly long enough, comprising as it does cirrhosis of the female breast, castration, menopause, functional impotency in men, chronic alcoholism, nervous vomiting, vomiting of pregnancy, neurasthenia, locomotor ataxia, exophthalmic goiter, the migraines, and hyper-

trophy of the prostate. From my own experience, so far, I believe that Dr. Kolipinski's claims are not exaggerated.

At present I am treating a case of mitral stenosis with injections of fibrolysin. Stethoscopic examination does not show any improvement as yet, but the patient says she feels better. She has had only seven injections. After giving her thirty or forty I shall report results.

One thing should be kept carefully in mind when thinking of fibrolysin treatment. If the patient has had an abdominal section the remedy should not be used, as it will dissolve the fibrous tissue in the wound and allow the abdomen to open. This also applies, of course, to any other operation where a cure depends on the permanency of fibrous tissue.

A "wrinkle" worth while is to touch the point of entrance of the needle with a drop of carbolic acid both before and after the injection. The former serves to anesthetize and disinfect and the latter to close the hole immediately and prevent entrance of dust; together they leave a brown spot which lasts several days and shows where the injections have been made.

A remedy which I believe is not used nearly as much as it deserves to be is terpinol. It is very useful in chronic bronchitis, especially in people of advanced age. It is best given in capsules made in the factory. Three or four of these capsules should be given each day. It is one of the few remedies from which these chronic patients get so much benefit that they will come back for more.

C. O. RICE.

Sabinas, Coah., Mex.

[Now that's the kind of letter I like to get enthusiastic, practical, helpful. Thiosinamin is a remarkable remedy. Not every one knows that it is made from oil of mustard. Fibrolysin is a solution of thiosinamin and sodium salicylate. We have an exhaustive article on this interesting subject, written by Dr. Waugh, which we hope to publish next month.

The chromium sulphate report certainly strengthens Dr. Kolipinski's claims. A few

others have also written about it, most of them favorably, but we should have a larger "vote" before making a decision. Why cannot we hear from a goodly "bunch" of the family?

Terpinol must not be confused with terpineol, an artificial perfume of lilac odor. Terpinol is a mixture of terebinthine derivatives, being produced by the action of dilute

Or, if the methods are *not* proving as satisfactory as you think they should, tell us about them, and we'll help and get the "family" to help too.

The subjects that appeal to us as peculiarly timely are—

Grip.

Cold in the head—coryza.

Cold on the chest—acute bronchitis.

Chronic cough—chronic bronchitis, bronchorrhea, winter cough, etc.

Muscular rheumatism, including lumbago, pleurodynia, etc.

Sciatica.

There! Surely among that list there must be something that will suit you exactly. Give it to us straight—and don't forget that we are interested in *modern* therapeutics, and that work with alkaloidal and active-principle measures will be specially welcome. But if it's therapy you send in, *real* therapy, it will be appreciated.

Now—I count on this little appeal to bring us in 100 articles, letters—what you will.

BARBER'S ITCH

I was much interested in D. G. Persson's letter on page 1259 of Nov. number on "Aseptic Barber's Shops." About two months ago a local barber who prides himself on his asepsis came to me with a suspicious looking rash on both hands. He had shaved a customer affected with "barber's itch," but gave the matter no thought, because the customer told him it would not "catch in the hands." But "catch" it did.

In about a week he was very much better, although some pustules were still freely exuding serum. Contrary to my orders he then shaved a man and the latter promptly became infected. I only learned of this later, after I had been treating the second patient some days. I heard, also, of another infection taking place from the same source. Now, is there *no* safeguard against this filthy disease? Why shouldn't the boards of health



Home of Dr. J. Knotz, Cologne, Minn.

mineral acids upon terpin hydrate and distilling. It is considered a bronchial stimulant, diuretic and antiseptic, given in profuse expectoration of phthisis and in all bronchial affections. The dose is given as 2 to 5 minims. Terpinol is also used as a cheap perfume for soaps and the like.—ED.]

BRONCHITIS—GRIP: ONE HUNDRED SHORT ARTICLES WANTED

Next month we shall be in the middle of the winter. We should, therefore, be discussing the winter ailments. We have some "stuff" on hand and we want a good deal more. There's no trouble in getting long articles—the difficulty is to get the short, crisp and practical kind, containing only alkaloids of thought without vehicle or menstruum.

Brother Doctor, we appeal to you for help. Please do not wait till tomorrow or next week; sit down and write us a personal man-to-man letter, telling just the methods that you use and that are bringing you success.

take up the matter? It certainly is an important one.

Personally, I always shave myself, but for hair-cuts I am of course dependent on the barbers. So is my small boy. So are countless thousands.

Very often "itch" can be aborted by frequent mopping off of the infected area with creolin solution, 2 in 100, or even stronger, if the patient can bear it. Let it dry on and then apply resorcin ointment. This plan has given me good results if employed early.

What do doctors think on this subject anyway?

C. D. MARTINETTI.

Orange, N. J.

[This is an interesting subject. Doubtless many of our readers have had experience with the treatment of barber's itch, and can offer suggestions. Come on.—ED.]

WHOOPIING-COUGH

There is an epidemic of whooping-cough now going on and a great variety of remedies are being used, with, however, little curative effect. The best and most reliable remedy that I have used is this mixture: Potassium bromide, 2 drams; fluid extract of belladonna root, 20 minims; whisky or diluted alcohol, 4 ounces. For a 5- or 6-year-old child the dose is about one teaspoonful every four hours through the day up to bedtime. The dose should be increased until the pupils are just a little dilated. This treatment is begun after the acute stage (tenth day). Also calx iodata for the catarrh. This is about all the drugs used or required to abort or control the cough in four to eight days. I have never found any other treatment very reliable in this disease.

I. N. MAYERS.

Speedwell, Tenn.

[Why belladonna? The action of the galenic is that of one of its chief alkaloids, atropine or hyoscyamine; therefore why not give the active principle and be certain of the dosage, certain of the purity of the remedy administered, certain of the re-

sult obtained? Atropine is undoubtedly one of the most valuable remedies in this disease. As a sedative we prefer to associate it with monobromated camphor, which does not stupefy the patient and upset his digestion as do the bromides. It's a mistake to give whisky to the babies; they don't need it, and it may do infinite harm. The doctor who overlooks calcium sulphide in whooping-cough is missing something good. This is a remedy which should be used in every case—and pushed!—ED.]

LOCAL USE OF MAGNESIUM SULPHATE FOR THE RELIEF OF PAIN

Following we print a short paper read by Dr. Solomon Solis Cohen at the last meeting of the American Medical Association and printed in the *Association Journal* for Dec. 4. The discussion is also reprinted. The facts, as given, are not new to our readers, but they will serve to emphasize more strongly the suggestions which have been made repeatedly in these columns, for a number of years, as to the analgetic properties of magnesium sulphate as a local application. Evidently some of the ideas promulgated through these pages are beginning to attract the attention of eminent members of the "faculty."

In certain cases of cutaneous inflammation, arthritis, etc., in which I was led to make observations on the effects of external applications of magnesium sulphate, certain deep-seated pains independent of the particular affection of which a patient complained, apparently disappeared in sequence—I do not say in consequence, but in sequence—of the application. In order to test whether or not this was a psychic phenomenon, other applications were made—simple saline solution, distilled water, magnesium chloride, sodium sulphate, etc.; and, while any moist dressing in these particular cases (I am not referring now to cases in general) seemed to diminish the pain somewhat, none of them had the same decided effect as the magnesium sulphate. The nearest in such power was sodium sulphate.

As to classes of cases: One was an aneurism. A man suffering from thoracic aneurism with projection of the chest-wall had some slight cutaneous irritation over the mass—I have forgotten its cause. Application of magnesium sulphate solution was made. The relief to his deep pain was so great that he asked to have the dressing repeated after the irritation had subsided. This apparently was a psychic reaction; yet when the application was changed to sodium-chloride solution without the

man's knowledge it failed to produce the same effect. But magnesium citrate likewise failed. The effect was not lasting and the application had to be repeated from time to time, and finally in this particular instance of aneurism it failed to have any further effect. Other cases in which this apparently reflex analgesia was observed were cases of gastric ulcer, gastric carcinoma, lymphatic leukemia, acute pericarditis, sciatica, headache of unknown origin, chronic pleurisy. In many instances it failed completely. To determine whether in any case there was any local anesthesia produced, tactile sense, pain sense, thermal sense, etc., were tested in normal persons, in the patients relieved by magnesium sulphate, and in patients not relieved by it. In no instance was any effect of any kind on the cutaneous sensation detected, whether the examinations were made within ten minutes or after thirty minutes to an hour. I present this merely as a curiosity of observation. The measure may be useful at times when one does not care to give morphine in cases of deep-seated pains, acute or chronic.

The problem is complicated and the method of observation is inexact, so that I am not now prepared to say that there was a definite chemical or pharmacologic action of the magnesium sulphate in these cases. The matter seems, however, to be worth proving further.

ABSTRACT OF DISCUSSION

Dr. Reid Hunt, Washington, D. C.: Dr. S. J. Meltzer, New York, did some experiments on animals in such a way that the psychic element could be completely eliminated. The remarkable results shown seem to be good reasons for believing that magnesium sulphate will relieve pain materially. Dr. Meltzer anesthetized a rabbit and while the animal was deeply anesthetized placed both ears in hot water for a very short time and then the right ear was treated with a strong solution of magnesium sulphate and the left ear with an isotonic solution of some other salt. Some little time afterward the ear treated with magnesium sulphate was upright and seemed normal, the ear treated with salts of the same concentration was drooping and evidently not on the road to recovery. Later, the ear treated with magnesium sulphate was practically normal, only a few ulcers being present; the other ear, treated with other salts, had largely sloughed away. Dr. Meltzer suggested treating burns with magnesium sulphate. It has been used to some extent for burns of the first and second degree and has given much relief and evidently aided greatly in healing.

Dr. Theodore Potter, Indianapolis: Do the members of this Section use the solution of magnesium sulphate in erysipelas? It is coming to be talked about recently and in some localities is rapidly supplanting the application of various other medicaments like ichthyol. We run from one thing to another and at present we run toward sulphate of magnesium. I have used it in a few cases of erysipelas; perhaps it has done as much good as cold water, which thus far seems to do as much good as anything. It appears that this drug will supplant other things rapidly, such as ichthyol, once widely used, and in which the profession has largely lost confidence.

Dr. Solomon Solis Cohen, Philadelphia: I am, fortunately, or unfortunately, of that mental temperament which cannot always make an unqualified

statement. I remember very well that my honored teacher of therapeutics used to be very positive concerning each particular drug that he was lecturing about, that it would "cure" many and various affections. All I am able to say of this or any drug is that it is useful under certain limitations. Magnesium sulphate, applied locally, in certain cases of erysipelas, is useful. But there are cases of intense, rapidly spreading and erysipelatous inflammation, with toxic systemic symptoms, in which I should be very reluctant to depend on the external application of epsom salt as being all that medical science could do for the relief of the patient. In mild cases of strictly localized erysipelas, without much toxemia, a dressing of cold, saturated magnesium-sulphate solution, properly applied, seems to be about as useful as, and perhaps a little more useful than, anything else that I have used. It is not so dirty as ichthyol and seems to afford the patient a great deal of comfort. It relieves the burning especially. I don't know that it checks the spread of the local infection, but it does relieve, to a marked degree, the local distress. It may confidently be used for such purposes, but it should not be used for the things that it will not do. I may add that I sometimes say to my students, and I think it may be said to physicians, while an elephant cannot climb a tree, yet an elephant is a very useful animal for heavy draught purposes. So with our drugs. Magnesium sulphate in the case of erysipelas may climb a tree; but it is not to be depended on for heavy draught.

[The credit for the discovery of this remarkable action of magnesium sulphate undoubtedly belongs to Dr. W. H. Burgess of Avondale, Tennessee. His ideas have been repeatedly given publicity through the columns of CLINICAL MEDICINE, and have been presented at length in his little book. Is it because Dr. Burgess is an "obscure" country doctor, without recognized professional standing, that his contributions on this subject receive no recognition. If he had written in German, and to the *Muencher Medizinische Wochenschrift*, there would have been no such oversight.

We have had frequent occasion to employ the magnesium sulphate locally for the relief of pain, and in our query department the expedient has been recommended again and again. Try it, Doctor, and report.—
ED.]

LOOK OUT!

We have good reason to believe that there will be, this winter, a revival of the efforts to get national and state legislation against the doctor's dispensing his own medicine. It is probable that a bill or bills will be in-

troduced in Congress prohibiting the sending of the so-called habit-forming drugs through the mails. While it is of course desirable to prevent laymen from getting hold of such drugs as morphine and cocaine, or individuals from catering to the vicious habits or misfortunes of others for their own profit, it is just as certain that no such bill which fails to exempt the physician from its provisions should be permitted to become a law. The doctor is justly entitled to purchase his remedies in the best market, where he can get the things that he requires, and at prices that are satisfactory. Any legislation that interferes with that right is class legislation of the grossest character.

We have also learned that a certain drug journal is preparing to create popular sentiment against the dispensing doctor by furnishing defamatory pamphlets for free distribution to the laity. Report to us every effort of this description.

We warn our readers to be on the lookout for all movements of this kind. We shall fight this pernicious movement, and so will every other medical journal which really has the interests of the rank and file of the medical profession at heart. We call upon our readers to keep us informed, sending full data, and to be personally active when anything of this kind crops out.

HAVE YOU CASES OF TUBERCULOSIS OR CANCER?

Some of our friends are doing interesting experimental work with these diseases and are having a degree of success in their treatment that is really remarkable. In order to determine, however, the exact field of usefulness of the method they wish to try it on a large number of cases. If you have any such patients, suffering from tuberculosis or carcinoma, and they are able to pay for ordinary hospital care, to cost from \$7 to \$10 a week, our friends will give them every attention, and entirely without professional charge, unless of course they are able to, and you think they should, pay reasonable fees.

The method of treatment is one that, if it does no good, can do no harm. About eighty cases of tuberculosis (most of them far-advanced) have been treated and there has been improvement in nearly all and apparent cure in a very large proportion. Third-stage cases are accepted, and advanced malignant disease, the only restriction being that no patients should be sent in for treatment who can not take the railroad trip safely and who are so nearly gone that they are not likely to survive for at least six weeks. Send in advanced cases if you will, but not those *in articulo mortis*.

Write the editor of CLINICAL MEDICINE and he will put you in touch with our friends.

PELLAGRA AND HOOKWORM

Every medical journal in the land is glean- ing information about pellagra to supply the eager demands of its readers for such material. We have supplied the best we could get. We will do still better now, by referring readers to the extremely valuable pamphlet on this disease issued by the Illinois State Board of Health. This monograph contains all of value we have seen in any publication and a great deal more not obtainable elsewhere. It is too valuable to abstract, and we believe we consider your interests best by advising you to write to the Secretary, Dr. J. A. Egan, Springfield, Ill., for a copy. We add our congratulations to Dr. Egan for the work he has issued, to whose completeness and value we take pleasure in testifying.

I wonder if we can not have some reports of our own on this disease and on hookworm for publication next month. Hundreds of our readers, especially those living in the South, must be coming in contact with one or both. We should have no difficulty in getting a number of practical papers, telling just how these cases look to the physician who attends them, and the methods of treatment he has used with the largest degree of success. We also want photographs, a bunch of them.

Please consider this a personal invitation to contribute and come on with your "stuff."



CLINICAL · MEDICINE POST-GRADUATE SCHOOL OF THERAPEUTICS

George F. Butler, M. D., Director
Thomas J. Mays, M. D.
Otto Juettner, M. D.

C. E. de M. Sajous, M. D.
William F. Waugh, A. M., M. D.
Alfred S. Burdick, A. B., M. D.

PART III.—LESSON FOUR

MALARIA

TREATMENT OF MALARIAL FEVER

Prophylaxis.—Malaria may be much restricted by thorough drainage. Planting of trees whose roots dry the soil is an inexpensive and desirable measure; all stagnant pools of water should be covered with crude coal-oil to prevent the propagation of mosquitoes. When necessarily exposed in a malarial region it is important to avoid going outdoors after sundown or before seven or eight in the morning, and to avoid unnecessary fatigue, overeating or drinking, and constipation. One is far more apt to acquire malaria by fasting or when tired than when the stomach is full and the person in good condition.

All sleeping apartments should be above the ground floor, the higher up the better. In malarial districts it is wise to take small doses of arsenate of quinine two or three times a day as a prophylactic. This drug should always be taken during the active malarial season, otherwise the system becomes too accustomed to it. Drinking of lemonade and a moderate amount of coffee act as prophylactics. Mosquito-nets should be used to keep these insects out of the house. The body should be covered up during sleep

and every precaution that circumstances permit (e. g. fires, smoke, etc.) should be employed to keep mosquitoes away.

As the subjects of malarial infection are dangerous to their companions they should therefore be avoided, or if this is impracticable, be compelled to sleep under mosquito-nets. This is more applicable in communities where malaria is prevalent. Houses should be placed, if possible, on high and dry situations, a clay soil (because retarding drainage) being avoided. In the neighborhood of houses the felting of natural grass should, whenever possible, be preserved, but if it be disturbed, the exposed soil should immediately be covered with clay or cement.

Manson says it is unwise to have flower beds or vegetable gardens near bedroom windows, or to allow water from bathrooms or cook-houses to flow over the ground in the vicinity of the house, or to keep water unchanged in tubs or water-butts for mosquitoes to breed in. Ponds should be stocked with fish, these tending to keep down mosquitoes by feeding on their larvæ. The neighborhood of swamps should be avoided.

Diet in Malaria.—Food in malarial fevers ought to be light and principally fluid; effervescing mixtures often help to clean the

tongue and settle the stomach. Lemon decoction, made by boiling for half an hour a sliced lemon, including skin and seeds, in a pint and a half of water, straining, diluting and sweetening, is much relished in malarial fever and may, with advantage, be taken systematically by all patients; fresh lemonade, fresh lime juice, weak cold tea and fruit ice-waters are all much appreciated by these patients. During convalescence the quality of the food should gradually be improved and if necessary supplemented by mild alcoholic beverages.

Treatment of Malaria.—The treatment of simple types of malarial fever comprises, first, that of the paroxysms; second, the interval, the latter including the prevention of return of the paroxysms, the relief of congested viscera, and the improvement of the blood and the treatment of malarial cachexia.

When the chill occurs with the onset of the paroxysms the patient should get to bed and be warmly covered. If there is hyperpyrexia, free sweating may be advanced by giving a hypodermic of pilocarpine, 1-10 to 1-6 grain. If there is extreme debility, it is better, however, not to give this drug, owing to the danger of collapse and pulmonary hyperemia. Next a hypodermic of atropine, gr. 1-134 to 1-67, to which brucine, gr. 1-20 to 1-10, or strychnine, gr. 1-30 to 1-20 may be added if there is much debility. This combination is especially indicated in the algid form, where intense cutaneous vasomotor spasm is to be quickly unlocked and failing vitality revived. It will also be found of value in hemoglobinuria, in which strychnine has given the best results of any remedy. Full doses, however, are essential.

Along with this hypodermic medication it is well to give 15 or 20 minims of chloroform in hot lemonade or a hot drink to which some capsicum is added. Indeed, the fluid itself should not only be hot but should be hot to the taste. Hot-water-bottles may be placed to the feet. This treatment will shorten the chill and lessen its severity. As soon as the chill has subsided, or if you are called to see a patient who is in other stages, immediately give calomel and podophyllin, 1-4 to 1-2 grain every half hour until 1 or 2

grains of calomel have been taken, this to be followed in two hours by a saline laxative. By means of the latter we should also subsequently keep the bowels open during the entire course of this disease. Then at once give the dosimetric or defervescent compound, one granule every fifteen or thirty minutes, not waiting for the bowels to move. If the congested condition of the circulation is very great, we aid the action of the compound by administering atropine with it. As soon as the bowels move administer quinine in some form.

In the remittent form it is well, as in all other forms, thoroughly to clean out the bowels first. Then commence quinine at 8 o'clock in the evening, giving 5 grains with some capsicum every hour for five doses, then every four to six hours. Reduce the hyperpyrexia by the means of baths, using ice when necessary.

Quinine furnishes the best illustration known to therapeutics of a true specific remedy. When quinine fails to relieve a malarial affection it is because the drug is not properly given or the alimentary canal is unfitted to absorb it. When the tongue is heavily coated and the bowels are constipated quinine may not act until after the intestines have been cleaned out. Reports from numerous American physicians indicate the absolute necessity of keeping the alimentary canal clear and aseptic, and elimination free. To neglect the liver is simply medical homicide, says an old physician from the Carolina rice fields.

No better drugs for the purpose of cleaning out the intestinal canal and stimulating the liver can be used than calomel, podophyllin, bile salts and emetine. Emetine, especially, is a very valuable stimulant. Intestinal antiseptics should invariably follow the laxatives. These two things, laxatives and intestinal antiseptics, are almost as essential as quinine in the treatment of malarial fever.

Quinine may be given at stated intervals without regard to the paroxysm, and in mild cases this method may serve; still, in most instances it is better to give an initial large dose four or five hours before the paroxysm is expected. The milder tertian agues yield

to doses of 10 to 15 grains, but severer types of malaria are better controlled by 30 to 40 grains. As a rule 15 grains may be prescribed five hours before the paroxysms and the dose repeated in an hour. Succeeding paroxysms may be met with 15 grains, while subsequently 5 to 10 grains should be given for four or five days, when the dose may still further be decreased to 5 grains twice a day and then maintained at this rate for a week or two until the spleen has regained its normal size and the disease is fully under control.

Manson thinks it best, in the *simple intermittent fever*, to give the quinine at the commencement of the sweating stage, but in the serious remittent and in the grave forms to give it at once.

Quinine does not render the blood immune against further infection, it only acts as a direct poison to the infective organism when present. Of the various salts of quinine that have been proposed for use in this disease the sulphate seems to be the most popular, although if the arsenate of quinine were given more general trial it would become, I believe, a greater favorite than the sulphate.

Large doses, I am inclined to think, are not needed in ordinary cases, the main point being to assure the absorption of the drug; and it is doubtful whether 30 or 40 grains of quinine given at one dose are all absorbed. Much, I think, depends upon its mode of administration and it is probable that much smaller doses will prove effective when given in connection with a saline effervescent, especially after the bowels have previously been opened up. It should, of course, be given when the stomach is empty. Large doses of quinine are not only unnecessary but they are injurious in many instances.

Quinine per Rectum.—Quinine is sometimes given by the rectum when conditions prohibit its being taken by the mouth, or when on account of obstinate vomiting it cannot be retained in the stomach. In this case the rectum must first be washed out with sterilized water. Dissolve 10 to 20 grains of dihydrochloride of quinine in a little

warm water and mix with 2 or 3 ounces of thin starch mucilage, add a few drops of tincture of opium, and inject this dose through a tube as high up the colon as possible. If care is not taken tenesmus may be provoked and a portion of the quinine enema ejected.

Hypodermic Injections offer a very serviceable method of quickly introducing quinine into the system, this mode being especially applicable in the pernicious form when the patient may be unconscious and unable to swallow. A certain amount of pain accompanies the introduction of quinine in this way, but no other risks are incurred, provided strict asepsis is observed.

One of the best forms of quinine for hypodermic administration is considered to be the quinine and urea hydrochloride, also known as carbamidated quinine dihydrochloride. This salt contains 70 percent of quinine and is extremely water-soluble, in fact a 50-percent aqueous solution can be made. The hypodermic dose is given at from 1 1-2 to 8 grains. It is claimed not to give rise to sores, and little pain.

The following formula has also been recommended for this purpose: Dihydrochloride of quinine, 20 grains; distilled water, 15 minims. This fills an ordinary syringe and is a full dose of 20 grains; however, much less than this amount is effectual in many cases if given subcutaneously. Solutions of the lactate and of the hydrobromide of quinine (soluble in 40 parts of water) also are used for hypodermic injections. Yeo says that we should probably avoid much of the pain the foregoing solution causes by using a syringe holding half an ounce, diluting the solution to that extent with warm sterile salt solution, and injecting this very slowly and deeply into the buttocks, the lumbar region, between the scapulas, or in the hypochondriac regions, either of which is suitable.

The solution should be sterilized by boiling; we should see to it that the syringe and needle is aseptic and the surface of the skin cleansed in the usual way.

Intravenous Injection of Quinine has been advocated in pernicious forms when

other channels of absorption cannot be relied on. For this purpose acid solutions may not be used. The following is a good formula: Quinine hydrochloride (not the acid dihydrochloride), 15 grains; sodium chloride, 12 grains; distilled water, 2 1-2 drams. This solution must be boiled and filtered before using, and while warm is quite clear. A bandage is applied above the elbow so as to distend the veins of the forearm, the small vein on the inner side of the forearm, is selected and the needle of the hypodermic syringe is introduced from below upward. The syringe is made to hold 75 minims (representing 7 1-2 grains of quinine), and the instrument is rendered perfectly aseptic before using. The bandage is then removed from the forearm and the fluid slowly injected into the vein. The occurrence of a small tumor at the seat of puncture would indicate that the needle had missed the vein. The puncture-wound is covered with colodion. The symptoms of quinine intoxication soon appear but do not last more than ten or fifteen minutes.

In giving quinine by the mouth, I think it is best to give it in divided doses, so that there will not be a moment in which the blood is not so charged with it as to render it impossible for the parasites to mature. No matter how large the single dose, it will act only on those microbes that are in an unprotected stage of development while the rest will remain to multiply.

Excepting possibly in the severer attacks, it seems likely that the arsenate of quinine in doses of a grain a day is equal to 15 grains a day of the sulphate. It so, the smaller dose and freedom from objectionable features of the big doses are worth considering; but in the dangerous fevers of the tropics always give quinine to effect.

Ordinary Malarial Fever.—It will be found in the ordinary cases of malarial fever that you can get best results by first giving calomel and podophyllin, followed by a saline laxative, then by the dosimetric or defervescent combination, and after this quinine arsenate, 1 centigram; berberine, 1 centigram; amorphous hyoscyamine, 1-4 milligram, one dose every two hours. This

treatment may be continued for a week. The second week drop the hyoscyamine, continuing the quinine arsenate and berberine for another week. At this time your patient will feel pretty well, but the medicines should be continued for at least another week, quinine arsenate and berberine, one dosimetric granule of each three times a day. After this, give the triple arsenates with nuclein, 2 to 4 of the tablets after meals for a month or six weeks, and you will have results never obtained before by mere large doses of quinine.

Precautions in Quinine Medication.—

Certain precautions in using quinine are demanded which it may be well to mention. Care should be exercised in giving quinine to pregnant women, for sometimes it undoubtedly causes miscarriage. Manson says, however, that the fact of pregnancy must not debar the use of this drug altogether, only that in such circumstances it must be employed in the smallest doses likely to be effective, say, 3 grains repeated every eight hours for a few days. A pregnant woman will run more risk and ill health from ague-fits than she will from a reasonable dose of quinine. In these cases, then, it should be much better to give the arsenate of quinine, or the combination recommended above, than the large doses of the sulphate. In malarial countries it is a wise precaution to give a few 5-grain doses of quinine during labor or soon after. The puerperal state seems to have the effect, as any other shock or physiologic strain might have, of wakening up the slumbering plasmodium malariae. A dose or two of quinine under these circumstances will do no harm and may, by choking off a threatening fever, avert suffering and anxiety, not to mention pain.

Calcium Sulphide has, during the last few years, been employed by many physicians as a remedy for various infectious maladies. Given in doses of 5 grains a day saturation is produced in a few hours, as can be noted by the exhalation of the characteristic odor of the breath and the skin. This saturation may be maintained for weeks, the medication being harmless when administered to adults in doses of even 50 grains

a day. If the doses are too large nausea may ensue, and so it is best to give it in doses of 1-6 to 1-2 grain, repeating every half hour, for while thus nausea is avoided, saturation is secured with the smallest possible amount of the drug. When the body is thus saturated with the sulphide, in most instances mosquitoes or any other insect cannot be induced to attack such person.

One thing is essential: the sulphide must be of the very best quality, full U. S. P. strength, containing at least 60 percent of true calcium sulphide. This drug is quite difficult to keep unchanged since it goes on decomposing apace, and unless fully up to the pharmacopeial standard should not be depended upon for medicinal effect. The ordinary article found on the market in powder and tablet form ranges in sulphide-strength from the merest trace upward, the U. S. P. shelf being found decidedly uncrowded.

Other Useful Drugs.—There are, in addition to those named, certain other drugs that are employed with more or less success in the treatment of malaria, some of which may be enumerated.

Methylene-blue is mentioned by Manson, who gives it in doses up to 3 grains, pushed until the urine becomes changed or signs of kidney irritation appear. Anarcotin was at one time (during a quinine shortage), extensively employed in India. The dose is 1 to 3 grains. Phenocoll hydrochloride has been administered, two or three hours before the expected paroxysms, with advantage and it is said to have succeeded in cases where quinine failed.

The tannic-acid treatment may also be tried in cases where quinine can not be taken. Capsicum, 1 grain, with 5 grains of quinine is said to succeed where quinine alone fails. The arsenate of quinine with berberine, emetine, or capsin, will answer better than 5 to 10 grains of quinine sulphate alone. Euquinine, lately introduced, is said to have all the virtues of quinine, without its bitter taste.

In *bilious remittent fever* there often is vomiting. To allay this, mustard poultices may be applied to the epigastrium, while

small hypodermics of morphine, sips of very hot water, effervescent mixtures, champagne, small doses of emetine, and all the remedies that aid in allaying nausea and vomiting are indicated. However, if in spite of treatment the vomiting persists, and it is impossible to give quinine by the mouth, the rectum should be cleared with warm water and an emena containing 10 to 30 grains of quinine disulphate, dissolved in 3 ounces of water, should be given. As soon as the stomach has quieted down, the remedy may be continued as long as necessary by the mouth.

Hyperpyrexia must be promptly met by prolonged warm baths, by a cold bath, rectal injections of ice water, ice-bags to the head, etc. At the same time quinine must be injected hypodermically or given in full doses and repeated every three hours until 30 or 40 grains have been administered.

If a patient suffering from malaria has dysenteric attacks, they may be controlled by intestinal antiseptics, usually alone, or else combined with morphine. If the kidneys are congested, mild salines such as potassium citrate or the bitartrate may be given with carbonic-acid water.

Comatose Types of Pernicious Ague Require, in addition to the hypodermic administration of quinine, active stimulation, to tide the patient over until the quinine shall have time to act. Morphine in full doses is useful, morphine with atropine, in whisky or brandy, may be given in addition to ammonia, camphor or chloroform, as a cardiac stimulant. Strychnine should be given hypodermically. If the surface of the body is cold from collapse, hot-water-bottles must be applied.

It seems needless to add that conserving the patient's vital forces and strength by proper stimulation, nourishment and nursing is of as great importance in malarial as in other fevers. In few if any other diseases there is a need for blood building as urgent and imperative as in the various forms of malarial fever. Whenever it is possible to combine hematics and constructive treatment with antiparasitic medication it should be given in the acute cases of brief duration. There-

fore, we think, that the arsenate of quinine acts better than the sulphate.

After-treatment of Malarial Fever.—

The bowels should be kept open by laxative salines. The triple arsenates with nuclein should be given three times a day. Baths, with friction, and exercise in the best air obtainable should also be advised. For a few weeks, especially to patients who reside in a malarial country, small or moderate tonic doses of arsenate of quinine should be given. Outdoor air, moderate exercise, and regular habits are of importance. Massage is to be recommended and may be gently applied over the enlarged spleen. Mercurial ointment sometimes appears of service when rubbed in over the spleen while ergotin is recommended by some clinicians to reduce that organ. Patients suffering from malarial cachexia always improve faster if they can remove for a few months to a nonmalarial district.

GEORGE F. BUTLER.

Chicago, Ill.

MALARIA: ITS TREATMENT

Modern investigation powerfully sustains the clinically derived conclusions of our fathers, that the bowels must be unloaded and the liver stimulated as the first indications in all forms of malarial disease where sufficient time is afforded for this purpose. We therefore administer calomel and podophyllin, 1-6 grain each, every half hour for six doses, follow with a full dose of a laxative saline, and repeat this as often as may be found advisable—but we do not quit until we *know* that the bowel is absolutely empty. Then we go a step beyond our forbears by disinfecting the intestine, using a sufficiency of one or other of the sulphocarbolates, of calcium, sodium or zinc; and of late we have been adding a milligram, every hour, of the sulphocarbolate of copper. The result is another of those recurring surprises as we note what a large share of the “malarial” symptoms is due to fecal toxemia.

Why not? We are now informed that the utility of arsenic in this affection is due to its power of rendering the red blood-cor-

puscles so unpleasant to the malarial plasmodia that the latter leave these cells alone. Is there anything quite as likely to lessen the resisting power of these corpuscles as a fecal element in the blood-serum surrounding them? Or anything so apt to render this serum a favorable culture-fluid for the plasmodia?

Now as to quinine. Is it better to infiltrate this salt gradually into the blood by administering a little dose every half or quarter hour, or to give it in one dose so as to be all available at the time when the new brood of parasites is hatched and ready to attack the red corpuscles, but in reality to be met and jugulated by our germicide while these noxious pests are as yet too young and inexperienced to have acquired resisting powers? If the attacks are frankly periodic (quotidian, tertian, quartan) the quinine may be given in one dose six hours before the expected paroxysm; if the onset is the more diffuse and the periodicity obscure, the infiltration method will be found best.

The sulphate of quinine is about the least-desirable of the salts we could choose, being so slightly soluble, the hydrochloride being by far the better. Of either one Gram may be taken as a full adult dose, whether given at once or divided into many fractions, this being the full 24-hour dose.

It has been claimed, and never refuted, that one grain of the arsenate of quinine fully equals therapeutically one Gram of the sulphate. I know of no better subject for decision by the huge collective investigation carried on by the members of this Post-Graduate course. Is the claim true? Is it always true, for acute and chronic forms alike? If only sometimes true, to what forms does it apply best? If sometimes not true, then why?

Pernicious Forms—Congestive Chills.

—Inject the quinine hypodermically, in full dose—1 to 4 Grams of the hydrochloride. This salt is soluble in 3 parts of alcohol and 9 parts of chloroform, or in 34 parts of water at 15°C while the sulphate requires 740 parts water at the same temperature. The arsenate is soluble in hot water. Do not wait for the action of cathartics, but give full

and plenty of quinine, and give it quickly. Death camps on the patient's trail, and only the speediest aid will fend off the stroke. Then get busy with your cholagogs.

Chill.—The chill may be broken by the administration of a centigram of pilocarpine hypodermatically; by a milligram of atropine, or a standard dose of hyoscyne, morphine and cactin; or by a dram of chloroform taken by the mouth as little diluted as possible. Or, following an ancient Hindoo maxim, you may give a dose that will "bring the tears into the eyes;" and this may be accomplished by mixing 2 drams each of chloroform, spirit of camphor, oil of cajeput and tincture of capsicum, with 1 ounce of ether, and giving a teaspoonful undiluted. Physiologically, the proper remedy to give is the powerful antispasmodic combination of glonoïn and hyoscyamine, of each 1-4 milligram, and strychnine arsenate, 1-2 milligram, given every ten minutes until the cutaneous capillaries are forcibly dilated and the internal hyperemia abated.

Fever.—The rising temperature should be moderated by the defervescent alkaloids, aconitine and veratrine, 1-2 milligram of each every ten minutes; the heart being steadied and the vital depression relieved by adding digitalin, 1 milligram, and strychnine arsenate, 1-2 milligram, with each dose. Judiciously administered these amply fulfil all the needs of any variety of case that may present itself.

Sweating.—During this stage there is need for continuing the vital incitants, dropping the defervescents, and adding quinine hydroferrocyanide, 1 milligram to each dose.

Hematuria.—Clear out the bowels, and the main causal element is eliminated; give strychnine arsenate to full effect; atropine enough to stop the loss of blood—it never fails; iron arsenate only if anemia becomes evident beyond a peradventure; quinine arsenate in doses of 1 milligram every one or two hours. No other treatment is ever needed—above all, no ergot or other alleged hemostatic, except only the atropine. This is enough and needs no support.

Cachexia.—The arsenates of strychnine, iron and quinine, each as indicated by vital

depression, anemia and continued infection respectively; nucleïn to reinforce leukocytosis; correct personal and domestic hygiene; and the treatment of every symptom, as it arises, with the remedies indicated then and there.

Prophylaxis.—Personal and domestic hygiene again; and in cleaning out and disinfecting the privy, do not forget the one the patient carries about in his abdomen and infinitely the more dangerous; saturate with calx sulphurata and arsenic sulphide, 6 centigrams of the one and 1 milligram of the other an hour before each meal and a double dose at bedtime, until the skin smells of sulphureted hydrogen, then half the doses to keep up the saturation. No mosquito will attack any person so saturated.

Enlarged Spleen.—There is one remedy, berberine; adult dose 1 grain per day, divided—1 centigram seven times a day; continued for six weeks. Usually a like dose of quinine arsenate is needed for continued infection. Do not get impatient and thereby be led to increase the dosage of berberine—is has caused rupture of the spleen from violent contraction (but that was from scruple-doses). It is perfectly safe in grain-a-day dosage, and that is enough.

Have complete, quantitative, laboratory examinations made of urine, blood and feces—it always pays to know all one can of a case, and we may find something else co-existent.

I shall add a few case-reports from the physicians of the malarial regions in the north of France, Belgium and Holland, which may give a useful idea of the treatment there found satisfactory:

Pernicious Fever.—Berruyer found a woman, 27 years of age, subject to utero-ovarian disease. Taking a vaginal douche she became chilled and was affected with prostration. The next day she had an intense chill, followed by fever and free sweating; by the following day she was seized with excessive pains in the whole body, then trembling of all members, quickly followed by delirium. At that time, in her neighborhood, there prevailed typhoid and pernicious fevers. Ligatures were applied to her arms and legs and the chill was lessened, the pa-

tient becoming more calm; the heart beat violently, pulse 140, temperature, 100.4°F. Prescription: Digitalin, aconitine, 1 dosimetric granule each every half hour; quinine hydroferrocyanide, 2 milligrams, every ten minutes. That evening she was better; general condition good, pulse 110, heart action almost normal. Continued only the quinine, 3 milligrams every half hour. Laxative saline next morning. The fever had ceased, leaving general debility, for which she took quinine, wine and strychnine arsenate. This woman narrowly escaped death from a pernicious fever.

Palustral Fever.—Van Inweghe, practicing more than thirty years in a malarial district of Belgium, testifies to his powerlessness before organic lesions while he was treating them with massive doses of quinine sulphate. Since adopting the method of giving fractional doses of quinine arsenate and the hydroferrocyanide with the addition of strychnine arsenate, however, he says, "it is rare that a fever resists." Burggraeve, who had seen much of these fevers, summarized his method thus: "Raise the vitality with quinine; give strychnine in the cold stage; moderate the febrile reaction, strengthen in the sweating period. In the chill, together with strychnine and quinine, give little spoonfuls of aromatic wine. As the pulse and fever rise, give aconitine, veratrine, digitalin; the last especially to control the heart and restore diuresis, 1 dosimetric granule of each every quarter hour. During the sweating one may give soup and wine. Do not resume quinine unless another access is foreseen."

Syncopal Larval Fever.—Bruyer describes the case of an old soldier with African fever returning, at times for five years. It recurred at a certain interval with a brief chill, syncope, vomiting for many days, ending in edema of each leg alternately. He was given 2 Grams of quinine, with an increase of the symptoms and the debility. He prescribed the quinine and strychnine arsenates, 6 dosimetric granules of each, hourly, then half-hourly. The next access was so feeble the patient believed himself cured. He was given eight doses of the same

drugs, to take two of each every hour. More fever on the morrow, better appetite, edema of the left leg confined the patient to his bed. In a few days he resumed his vocation. The syncopal form is especially fatal despite quinine. The fever precedes and causes the lesions, and hence is easier to jugulate than when it is strictly secondary to lesions preceding it.

Malarial Cachexia.—A young man had been treated more than a year, unsuccessfully, for a tertian intermittent malaria. He was confined to bed, bloated, eyelids infiltrated, lower limbs edematous, skin yellowish, anemic, spleen enlarged, heart irregular and palpitating at the least movement, *bruit de souffle*, no albuminuria; the fever had become irregular. Treatment: For the intermittent, quinine sulphate, 1-2 Gram daily; for the cachexia, the arsenates of strychnine and of iron, of each three dosimetric granules twice a day; to stimulate the stomach, quassin, 3 milligrams before meals. In two weeks the patient was out and in three months had resumed work as a farm laborer. (Coppens.)

This man lived in a country so malarial that nearly everybody had an enlarged spleen. Still, this is not the treatment we should employ. The bowels should have been unloaded by cholagoges, and disinfected: the plasmodia destroyed by quinine arsenate, a grain a day; the spleen reduced by berberine, same dose; the blood restored by iron arsenate; vitality incited by strychnine arsenate; the edema driven off by digitalin. Nuclein should have been added to restore the protective powers of the body.

WILLIAM F. WAUGH.

Chicago, Ill.

PHYSIOTHERAPY IN THE TREATMENT OF MALARIA

The term "malaria," in its specific sense, refers to an infectious fever, intermittent or remittent in character, which is due to the so-called plasmodium malariae of Laveran. This microorganism gains access to the body through the bites of insects, mainly mosquitoes belonging to the genus anopheles.

The characteristic signs of malaria are enlargement of the spleen, deterioration of the blood and acute attacks consisting of chills and fever of variable duration and frequency. In an ill-defined general sense the term malaria refers to the vitiated state of the system which is usually found in malarial patients, although it cannot be denied that many forms of autointoxication (especially the so-called "bilious" condition) are erroneously looked upon as being of malarial origin.

The "Darkness" Treatment.—Some years ago American surgeons in Puerto Rico investigated the truth of the statement made by the natives that dark, gloomy weather lessened the severity of malarial attacks and that total darkness would completely prevent them. Experimentation along these lines substantiated the correctness of the statement. It was shown that confinement in a dark room did prevent malarial attacks. For a year or two the "darkness"-treatment was quite a fad in the West Indies. The two scientific facts which these experiments have demonstrated beyond the shadow of a doubt are:

1. In a person bitten by a mosquito and thereby infected with the plasmodium exposure to sunlight favors the malarial outbreak and increases its severity. This is not due to any specific action of light or special susceptibility of the germ to light. Light stimulates the cutaneous circulation and has a distinctly irritating effect on the red corpuscles of the blood which carry the germ. In this way the germ is aroused and disseminated. Hence the malarial exacerbation.

2. In a person not infected with malaria exposure to sunlight increases the resisting power of the system by the tonic effects of light on the red blood-cells. Under given favorable conditions light may act as a prophylactic in the sense indicated.

The fact that mosquitoes are more active in bright weather and that, therefore, infection is more likely to occur, should not be lost sight of.

The Malarial Paroxysm.—In the treatment of chills and fever much good can be

done by forcible elimination through the skin. During the chill the application of dry or moist heat to the entire body-surface is to be recommended. The cutaneous reaction, consisting in active hyperemia and diaphoresis, shortens and ameliorates the attack. The fever which follows is less severe and does not last as long.

I beg to remind the reader of a previous lesson in which the effects of powerful cutaneous elimination on metabolism and oxidation were discussed. The dry-heat cylinder, the electric light bath or the moist hot-pack may be employed. Hot drinks may be given during the chilly stage, to be superseded by cooling drinks during the febrile stage. If sweating is induced an hour or more before the expected attack by the use of the electric-light bath, the hot-air cylinder or a complete hot-pack, the malarial paroxysm is very materially modified in its course and manifestations and not infrequently entirely prevented. Following the acute paroxysm a long-continued sun-bath is beneficial.

Chronic Malaria.—This term is used to express the vicious state of the system produced by acute malarial infection. It is the postparoxysmal or interparoxysmal state which is sometimes called chronic malaria. "Malarial cachexia" is a term which is also employed in connection with the subject under consideration. To combat this chronic condition the following therapeutic measures should constitute the main features of the treatment:

1. *Carbohydrate diet* is to be insisted upon in order to encourage active metabolism and prevent retention and accumulation of waste. Exclude meats entirely, encourage the use of raw fruit and fresh water in large quantities.

2. *Irrigation of the colon* every two or three days is a very valuable auxiliary, especially in the "bilious" types of chronic malaria.

3. *Active elimination* two or three times a week is of overtowering importance. The electric-light bath answers an excellent purpose in this connection, as does the dry-heat cylinder. Where these technical resources

are not available, the complete pack (hot or cold, depending on the reactive power of the individual patient) may be substituted.

4. *Sunlight and fresh air* are of cardinal virtue. It may seem trite to insist upon the hygienic value of these fundamental pillars of all rational therapy. The plasmodium thrives best in marshy, humid places where decomposition and fermentation are going on. This holds good in regard to its habitat in the body as well as outside of it. Where the circulation is sluggish, metabolism slow and elimination imperfect, the soil is excellent for the malarial poison. It is imperatively necessary to counteract the effect of suboxidation and autointoxication by stimulating the circulation, promoting metabolism and increasing elimination. Hence the importance of sunlight and fresh air in the treatment of the malarial state.

Enlarged Spleen and Liver.—A large spleen sometimes yields and is made to shrink if gentle but deep petrissage is systematically employed. Vibration over the region of the liver is useful. Pope recommends the use of the alternate hot and cold douche over an enlarged liver and spleen. Galvanism (5 to 6 millamperes, negative pole to affected organ, positive pole at a distance) is not without value. Static sparks over the enlarged organs or, better still, the static induced current may be used with much benefit. Good results follow the use of the high-frequency current (vacuum electrode over affected area). Local sun-baths are recommended by many.

Headache.—Negative static breeze for ten to fifteen minutes. Massage over temples and forehead, pressure over occiput. Malarial headache is ordinarily of stomach or liver origin and should be treated accordingly.

Biliousness.—This term conveniently covers the vast array of symptoms produced by a torpid liver. It is, therefore, an autointoxication, the breeding place of the poison being the sluggish portal circulation. Irrigation of the colon is always indicated. Deep abdominal massage, especially over the epigastrium and the right hypochondriac region, is very beneficial. The abdominal

cold moist-pack may be given every day or two for an hour. The alternate hot and cold douche to the right hypochondrium and also over the dorsal region of the spine is very effective, giving force and tone to the blood-mass within. In most cases a general sweat every three or four days is very desirable.

Request for Information.—In connection with the "darkness"-treatment of malaria, referred to above, I should like to ask my colleagues in the malarial districts of the South for some information. Finsen once stated that the negro is immune against malaria on account of the pigment in the skin absorbing the light-rays which help to disseminate the malaria-germ. Is the negro really immune? Does he suffer from intermittent fever? Is the disease of a milder form in the negro?

OTTO JUETTNER.

Cincinnati, O.

COMMENTS ON THE LESSON

And now for another year of hard, earnest work! We are entering a study period in the Post-Graduate Course which should be of exceeding interest and may be made so if we can have the cooperation of every reader. We want more of the short articles which we have been publishing—more criticism, more suggestions.

While we have many students enrolled we should have five times as many. Why may we not? Numbers breeds enthusiasm. The more that participate in these studies the more rich and varied will be the comment, and the greater will be the reaction upon the teaching body.

We should be exceedingly glad to have groups of physicians take up the Course together. A good example is that recently set by "The Redbank Physician's Protective Association," a Pennsylvania organization which enrolled as a body, every member becoming a subscriber to CLINICAL MEDICINE, and all agreeing to take the Course. They have the advantage of association, of being able to study together as a local group. There is not only the knowledge to be gained; there is the social advantage, the

pleasure of "getting together" at regular intervals. I wonder why we cannot have many more of these local groups, and in all parts of the country.

The President of the Redbank Association, Dr. C. E. Sayers of Hawthorn, has promised to send us their plan of the organization. We shall be glad to print it in an issue of *CLINICAL MEDICINE* as a guide to other local societies which may decide (as we hope many will) to go and do likewise.

This month the subject is "Malaria." It should be of exceeding interest to all our readers, but particularly so to the many who are practising in the South or in the tropics. We have subscribers in Mexico, South and Central America, Asia Minor, China, Africa—indeed, all over the world. Brother, *you* are respectfully invited to participate.

Right here I want to say that those who are not formally enrolled as students can do their share to make the Course a success by sending in germane items of helpfulness whenever and wherever they see an opening. Many have written us that they read every lesson through with enjoyment yet have never enrolled as students. We shall appreciate the cooperation of every such a one.

A "DEGREE" FOR STUDENTS IN OUR POST-GRADUATE COURSE

When we organized the Post-Graduate Course we made it clear (or at least tried to) that the School granted no degrees and that its certificate carried with it no legal right to practise in any state. It is simply an evidence of medical study done by correspondence, and well done. We wish to restate that fact, so that there may be no misunderstanding of what follows.

Dr. Otto Juettner has perfected arrangements with the Cincinnati Post-Graduate School of Physiological Therapeutics by which it is made possible for students taking our postgraduate work, through *CLINICAL MEDICINE*, to obtain the degree of B. Ph. (Bachelor of Physiotherapy). The candidate must fulfil the following conditions:

1. Applicant must be a graduate of a reputable medical school and must be a *bona*

fide practitioner of medicine in good standing with his school.

2. Applicant must take the Course in *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*.

3. Applicant must pass a written examination in physical therapeutics, accompanied by a statement that the paper presented has been prepared by himself, unaided.

4. Applicant must matriculate as a correspondence-student of the Cincinnati Post-Graduate School of Physiological Therapeutics and present his credentials as to graduation and standing. Within a week after his application is received he will be informed as to his eligibility.

5. The degree will be conferred six months after application has been received and the applicant has been found a suitable person for the degree.

All other information will be forwarded by personal letter on writing to Dr. Otto Juettner, Cincinnati, Ohio.

TALKS ABOUT TYPHOID]

Drug-Treatment of Typhoid.—Dr. F. F. Attix of Lewiston, Montana, has the following to say regarding the method he employs in the drug-treatment of typhoid fever:

"First, clean the mouth with a tooth-brush and an alkaline mouth-wash. Secondly, give calomel, gr. 1-6; podophyllin, gr. 1-6, one such dose every hour for six or eight doses. Saturated solution of magnesium sulphate, or in the effervescent form, to clean out; occasionally half a teacupful of castor oil will be needed to complete the job. High saline enemas or enemas with sulphocarbolates frequently are indicated. Once you have completed the work, it is easy with simple laxative doses to maintain a clean canal.

"The indications for intestinal antiseptics are, to prevent the too rapid multiplication of typhoid and other bacteria; to render their feeding ground less desirable for their propagation and, by so doing, diminish their numbers; to limit the absorption of their toxins and the depressing effect on the human economy, thus making it more able to resist the invasion of the germs and their

poison. In this manner a severe type is modified and complications—high fever, great depression, loss of weight—usually are avoided.

"When typhoid germs have reached the blood-stream, the case is usually well advanced and the natural resistance is largely overcome. It is more difficult to master this condition, especially if the germs are present in large numbers. Calcium sulphide, gr. 1-6 hourly until saturation and then often enough to maintain its effect, is useful. Merrell's normal tincture of echinacea, 15 to 30 drops every two hours, also is useful. Solution of nuclein, 5 to 15 drops on the tongue every two hours, to increase leukocytosis, is a valuable aid in fighting bacilli by increasing the phagocytic power of the blood.

"Medicine used to reduce the temperature must do so gradually. Aconitine and strychnine, given in small and frequently repeated doses to effect, are useful. If pulse and heart indicate a cardiac tonic, digitalin may be added and the dosimetric trinity may be used. These are especially indicated the first week of the disease."

Use of Sulphocarbolates.—In commenting on the use of sulphocarbolates in the treatment of typhoid fever, Dr. John Stuart Monon, Indiana, has this to say:

"I use the sulphocarbolates because clinical experience has taught me that I can get my typhoid patient up in shorter time and in better condition than I can without the sulphocarbolates. I find that when the sulphocarbolates are used, the bowels can be rendered so nearly aseptic that the bismuth salicylate will hardly stain the stools.

"I find that it is of little importance what the name of the disease may be, but it is exceedingly important that the alimentary tract be clean. Autointoxication is the key to a host of human ills. The "clean-out, clean-up and keep-clean" principle can be enforced in a very satisfactory manner when the sulphocarbolates are brought in to aid.

"In gastrointestinal diseases produced by food that cannot be digested fermentation takes place, gases are evolved, the entire digestive tract is distended. The result is pain, vomiting, diarrhea. As soon as the

pain has been relieved and the tract cleared of the foul material, zinc sulphocarbolate may be given. It will then do good work.

"In phthisis zinc sulphocarbolate will keep the bowels aseptic and aid digestion by overcoming fermentation and will control the diarrhea. There may be reasons for not using the sulphocarbolates, but until I find satisfactory ones, I shall continue to use them."

High Temperature; Intestinal Antisepsis, etc.—Dr. Fremont E. Wood, Vella Verde, Sonora, Mexico, has had a large experience in the treatment of typhoid fever and other infectious diseases, and we are always interested in reading accounts of his experiences. Dr. Wood writes as follows regarding typhoid fever:

"The highest temperature I have taken was 104°F. Condition, semimoribund, administered medicine with difficulty; patient obeyed order to swallow—this from half-unconscious habit, he being a soldier. Succeeded in administering 20 grains intestinal antiseptic of the three sulphocarbolates; and a capsule containing 1 grain podophyllum and 2 grains monobromated camphor. Also managed to get the sick man to take a copious draught of hot water. I invariably assure myself that the regulation dose of podophyllin has been taken, then do not lose any precious time to administer the intestinal antiseptics. This patient was not brought to me until the acme of the fever was close at hand. Two hours after the initial dosage I made it a point to administer personally a repetition of the combined antiseptics and monobromated camphor and added gelsemin in as large single dosage as I dared to give, to tide the man over until such time as I could see him again.

"Are we ever fault-finding with conditions where in reality the invalid is surrounded with comforts? Are we also fault-finding with trained nurses? Particular about diet? The sick, always with us, are not even sure of being able to take their medicine and so often get none except we give it with our own hands, and they frequently await our next coming wholly without attendants of any kind.

"My patient made an uneventful recovery. The intestinal antiseptics lessened the duration of the fever, which I continued with the monobromated camphor and gelsemin till the abatement of the fever, following with the triple arsenates through the convalescent stage.

"I have depended on cactin for the purpose of regulating the circulation in febrile states more than on any other one remedy, combining it with such treatment as will eliminate intestinal toxins and prevent their further production. This in typhoid types and typhoid pneumonia. In one case of the latter kind I had excellent results, combining sparteine, lobelin, podophyllin and the compound intestinal antiseptics—the podophyllin administered with the initial dose of the combined intestinal antiseptics. The patient was kept to the point of slight nausea, for three days, on lobelin. Convalescence was rapid on the triple arsenates. I have also employed, in typhoid malaria, emetine in conjunction with the above combination of podophyllin and sulphocarbolates with excellent results so far as circulatory improvement was concerned."

Effects of Intestinal Antiseptics.—Dr. William C. Post of Maquoketa, Iowa, always has something practical to report. He says:

"By the use of intestinal antiseptics I seek to neutralize the toxins of perverted digestion due to the derangement of mechanism and perversion of secretion concomitant with the attack, and also to destroy a very large proportion of the specific bacilli and their own toxin, where colonized in the small intestine, thereby assisting in the prevention of further invasion of the blood-stream and extension of infection. As to the modification of the course of the disease by this procedure, it is plain to see. Headache is improved; delirium, if present, passes away; temperature falls markedly; and the whole organism, relieved of this part of the invading force, is in much better shape to wrestle with the remainder of the invaders and their specific poison. Thus it can be said truly, that, if evacuation, elimination and intestinal antiseptics be thoroughly carried out in the be-

ginning of the attack, its intensity will markedly be relieved and its duration much shortened."

The Diet in Typhoid.—Dr. Post's answer to another question is also very interesting. He writes:

"Logically, we should aim at limiting to the utmost degree the possibility of taking in any further infection of any kind, so we must see to it that the food is free from all possibility of contamination and the drinking water absolutely pure. We also should endeavor to limit the amount and character of food likely to put strain on the already weakened digestive powers, or which through imperfect or perverted digestion would furnish material for fermentation or perversion of metabolism, which, in turn, would generate other toxins to be absorbed and still further, to poison the already weakened body. Then, too, we should try to furnish a dietary which should give enough calories to make good the amount 'burnt up' in the production of the fever, and so prevent drawing on the tissues of the body itself and causing undue emaciation.

"The diet of the typhoid patient depends upon his condition, and there can be no cast-iron rule to regulate it. For the first twenty-four hours of the concurrent treatment it will be well to give the patient nothing but pure water, which, by the way, he must have in plenty throughout the course of the attack. After that interval of abstinence he may have fruit juices, beef juice, egg-albumen flavored with orange or vanilla, milk (preferably soured by the use of cultures of the bacillus of Massol), fresh buttermilk, and in favorable cases, sweet milk and raw eggs. After a few days, if doing well, he may have cereal waters and gruels, and soft-boiled eggs, cereal flake-foods, etc., gradually establishing a fuller diet according to his improvement in symptoms. We must individualize the diet of every case, and the changes from a liquid to a semisolid, and finally solid dietary must be very gradual and depend absolutely upon the results of each change."

Value of Sulphocarbolates.—Here is another strong testimonial for the sulpho-

carbolates. It is from W. P. Barron, Carmona, Texas:

"I have invariably been able to influence favorably the course of all febrile diseases by the use of the sulphocarbolates. I can see no reason why I should not give them, but there seems to be every reason why I should. I employ them in malaria, pneumonia, grip—in fact, wherever I have a condition of fever in my cases. In four years I have had but three deaths: two premature twins and one case of chronic Bright's disease—this in the malarial belt of Texas, with 1500 inhabitants working at a sawmill, which never makes for a health-resort. I think the sulphocarbolates have helped in this record, together with the other alkaloidal methods. Whenever I am 'shown' a better way, all right, but until then, sulphocarbolates 'for mine.'"

Dr. C. H. Willingham of Whitehouse, Texas, has this to say about the sulphocarbolates in typhoid fever:

"My reason for using the sulphocarbolates in typhoid fever is, that I know that since I have begun the use of them I have had better results than before their employment. After cleaning out the intestines they aid in disinfecting the bowels and also to limit the multiplication of the typhoid bacilli and their toxins; consequently the bowels are kept in a better condition."

EXAMINATION QUESTIONS

1. What is the present teaching concerning the mode of transmitting malaria? Outline measures to prevent it, illustrating with the experience at Panama.

2. Give a plan for personal prophylaxis against malaria. What did Reed, Carroll and Lazear demonstrate concerning it, and how?

3. At what stages of the disease should quinine be given, in what manner and in what doses (1) in intermittent fever, (2) in remittent fever? Explain why.

4. What is meant by (1) quotidian, (2) tertian, (3) estivoautumnal fever? Differentiate according to cause.

5. How would you (or do you) treat the chill of severe malarial fever? The comatose types of pernicious malaria?

6. What influence has the alimentary canal on the production and severity of malarial paroxysms? What treatment do you suggest?

7. In which forms of malaria would you use the smaller dosage forms of quinine (quinine arsenate and hydroferrocyanide) and in which the large or massive doses?

8. Prepare a table showing the solubility of the most important quinine salts, and the percentage of quinine alkaloid which each contains.

9. Give technic for hypodermic administration of quinine.

10. What are the characteristics of malarial neuralgia, and how would you treat it?

11. Upon what hypothesis should calcium sulphide be used in the prevention of malaria?

12. What is "black-water fever?" How do you treat it?

13. What remedies are of most value for the post-febrile anemia and cachexia of malaria?

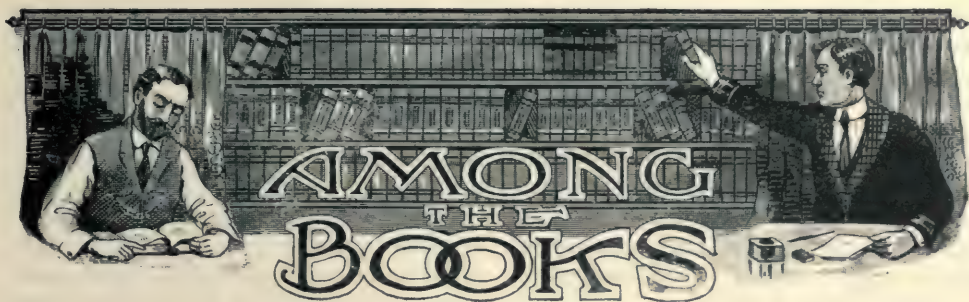
14. What is the "darkness" treatment of malaria? State the theory of the fluorescent action of anti-malarial remedies.

15. How would you combat chronic malaria, hygienically, dietetically, etc.?

WE WANT COMMENTS

Just a final emphasis, to impress upon you that we want comments on the subject-matter of this lesson. For instance, next month we hope to get a wealth of instructive matter concerning the treatment of malaria in all its forms and its multiple complications and sequels. This request is made not only to those who take the Post-Graduate course but to everyone who may go through the lessons. We are particularly anxious to draw out original ideas, therapeutic technic, practical treatments which have been tried and found good on the actual firing line.

Furthermore, we give fair warning that next month (February) we shall take up Influenza. We want to make this lesson one of the strongest we have ever had and we are going to appeal to you, the student body, to come forward with as many live suggestions as you can dig up from all the resources of your minds and all the richness of your many experiences. Some of these may well be printed next month, others held till the month that follows, but *get busy now*.



WITTHAUS' "MEDICAL JURISPRUDENCE"

Medical Jurisprudence, Forensic Medicine and Toxicology. By R. A. Witthaus, A. M., M. D., of Cornell University, and Tracy C. Becker, A. B., L.L. B., of the University of Buffalo, with the collaboration of many eminent authorities. Second edition, volume iii. New York: William Wood & Co., 1909. Price, per volume, \$6.00.

This volume of this highly important and authority-inspiring work steadily maintains the excellency and comprehensiveness with which it started out, as evidenced in the first volume issued and continued in volume ii. The following is an enumeration of the subjects discussed in the present volume: Medicolegal relations of vision and audition, and injuries of the eye and ear; insanity in its relation to medical jurisprudence; mental unsoundness in its legal relations; care and custody of incompetent persons and their estates; digest of the statutes of all the states relating to the above; examination of blood and other stains; examination of hairs. This work is sold only in full sets.

BALL'S "BACTERIOLOGY"

Essentials of Bacteriology. By W. V. Ball, M. D. Sixth edition, thoroughly revised, with 135 illustrations, some in colors. Philadelphia: W. B. Saunders Company, 1908. Price \$1.00.

This is one of the well-known series of Saunders Question Compendis, uniform in style with its numerous predecessors. It is just what it professes to be, "a concise and

systematic introduction to the study of bacteria and allied microorganisms." A very useful little book for the busy physician's handy library and laboratory.

EMERSON'S "LEGAL MEDICINE"

Legal Medicine and Toxicology. By R. L. Emerson, A. B., M. D., New York and London: D. Appleton & Co. 1909. Price \$5.00.

"The subject of legal medicine is one which is too little understood and appreciated by the general practitioner and medical student. This book has been written to fill the need of a single volume, treating the subject from as practical a point of view as possible and with special reference to the need of the busy practitioner who suddenly finds himself confronted with a medicolegal case." Thus says the author, one time instructor in physiological chemistry in Harvard University, in his short preface and in the succeeding pages, and he certainly thoroughly adheres to his well-conceived program.

The book is divided into three parts, the first being devoted to legal medicine. The subjects here treated are sudden death due to natural causes; signs of death; rigor mortis and putrefaction; medicolegal postmortem examination; identity; sex and age; death by asphyxia; hanging, strangling, suffocation, drowning, death from cold, heat, electricity and starvation; burns; wounds; fractures; rape; pregnancy; infanticide; sexual disability in the male and in the female; paternity, legitimacy; malpractice; coroner's inquests; insurance; medical witnesses, evidence, testimony; legal points affecting phy-

sicians. Part two covers toxicology; gaseous, inorganic, organic, alkaloidal, and ptomain poisons; blood; seminal stains. Part three gives all individual state laws on the practice of medicine. Illustrations are given of some plants from which the more frequently used alkaloids are derived; also plates showing effects of poisoning with arsenic, paris-green, mercury, phosphorus, carbolic acid, potassium cyanide and oxalic acid; also spectra of blood.

HIRSCHMAN'S "DISEASES OF THE RECTUM"

Diseases of the Rectum. By Louis J. Hirschman, M. D., of the Detroit College of Medicine. With 147 illustrations, mostly original, including two colored plates. St. Louis: C. V. Mosley Medical Book and Publishing Company. 1909. Price \$4.00.

This book is intended for those diseased conditions of the rectum which can be treated in the office without resorting to general anesthesia, and in which local anesthesia may suffice or none at all is required. In this way the author permitted himself more room, and this he wisely, clearly and comprehensively occupied with his practical and excellent teachings. This is a book which will prove of great service to the young practitioner especially although of not less interest and instructive points to the oldest of us.

"DISEASES OF THE BONES AND JOINTS"

Diseases of the Bones and Joints. Clinical Studies by Joel E. Goldthwait, M. D., Charles F. Painter, M. D., and Robert B. Osgood, M. D. Illustrated. Boston: D. C. Heath & Co. 1909. Price \$6.00.

It is a happy idea that a few physicians who chance to be interested in a certain given disease should associate themselves in its closer study, more or less *pro bono publico*, as it were. Then, too, they will be likely to do good work when they will remember that *tres faciunt collegium*; that while three collaborators seems just right, too many may spoil the broth, because *tot homines tot sententia*. To this happy thought is owing

the existence of the book before us. As to treatises on diseases of the joints the profession is not much overcrowded and so every monograph from competent sources on this topic, such as this present "studies" is, must prove most welcome to the studious physician.

Nor is this excellent monograph comprehensively exhaustive, as the authors themselves modestly admit. The book comprises 673 royal octavo pages printed comfortably for the eyes to read, and an index of ten pages. The first 240 pages are devoted to tuberculosis of bones and joints, the next 166 pages to nontuberculous diseases of the joints, and the following 230 pages to various diseases of the joints, besides chapters on aneurism, tabes mesenterica, stoop-shoulders, congenital elevation of scapulæ, subdeltoid and subcoracoid bursitis, recurrent dislocation of shoulder, brachial neuralgia, and the use of plaster-paris in orthopedic surgery. No doubt this book will serve to create in its readers an appetite for more of such mental pabulum.

BARWELL'S "DISEASES OF THE LARYNX"

Diseases of the Larynx. By Harold Barwell, M. B., F. R. C. S. London: Henry Frowde. Price \$1.50.

This book, small as it is, will be found helpful to the general practitioner and not without much interest to the American specialist. It emanates from the pen of a practising physician and is (perhaps *therefore*) full of treatment as well as of symptomatology.

AIKENS' "STUDIES FOR NURSES"

Primary Studies for Nurses. By Charlotte A. Aikens. Illustrated. Philadelphia and London. 1909. Price \$1.75.

We find this book a most excellent medium for introducing a knowledge of the human body in health and disease to anyone who has passed the courses taught in our common schools. Moreover, it ought to stimulate the earnest reader of this book to ask for more

of that kind, and to him or her that asks answers will be readily given in our age.

SMITH'S "SUTURE OF ARTERIES"

Suture of Arteries: An Experimental Research. By E. Archibald Smith, M. B., F. R. C. S. London and New York: Henry Frowde. Price 90 cents.

This is one of the valuable and neat medical publications of the Oxford University Press. The subject of this book is of great appealing scientific interest and will amply repay a careful reading.

"PRACTITIONER'S VISITING LIST"

We have received a copy of the excellent visiting-list published by Lea & Febiger, Philadelphia. This is one of the oldest and one of the best of its kind. In fact, it has been before the profession so many years that we need not say a word in its praise—just a reminder should be enough. There is the usual dose-table, suggestions for emergencies, etc. It is made for 30 patients, *with* reading matter, and for 60 patients, *without* reading matter. Price for either is \$1.25. Address Lea & Febiger, Philadelphia or New York.

WARBASSE'S "MEDICAL SOCIOLOGY"

Medical Sociology: A Series of Observations Touching upon the Sociology of Health and the Relations of Medicine to Society. By James Peter Warbasse, M. D., Surgeon to the German Hospital; Attending Surgeon to the Seney M. E. Hospital, etc. Published by D. Appleton & Co., New York and London. Price \$2.00.

Those who have had the opportunity to read the brilliant editorials of Dr. Warbasse, first appearing in *The Journal of the New York State Medical Society*, later in *The American Journal of Surgery*, will recognize some old friends in this book. But it is much more than a compilation of editorial or other previously published writings. As the matter is here presented it is a fairly complete, if somewhat disjointed, presenta-

tion of the great sociologic questions of medical and semimedical interest. Some diverse problems, as the alcohol question, the venereal peril, sexual hygiene and sexual morality, the social evil, our high-pressure social system, individual immunity, household sanitation, Christian science and the Emmanuel movement, receive intelligent and earnest consideration, and they are treated in such an interesting way as to be appreciable by any layman.

The second half of the book is of special interest to physicians, and in it the author discusses such subjects as bacteriology and botany, therapeutic tendencies, future fields of medical activity, medical science and human progress, the diffusion of medical knowledge, preparation for the study of medicine, medical examinations and licensing, the physician and politics, medical libraries, the history of medicine, medical societies, doctors' sons, and many other things of equal interest.

Altogether this book is the work of a thoughtful, scholarly man, one that cannot be read without profit, and hardly without pleasure. We earnestly recommend its purchase.

"INTERNATIONAL CLINICS"

International Clinics. Volume III. 1909.

This is a quarterly of illustrated lectures and specially prepared original articles on all parts of medical practice by leading physicians from all parts of the civilized world. It is published by the J. B. Lippincott Company (Philadelphia and London) at \$2.00 per volume. It has always caused the writer wonder how such an amount of most valuable medical literature, not copied, plagiarized or pirated, but genuine first-hand and first-class articles could be offered, year after year, for the very low price asked for these volumes. What else can it be but a large market that enables the publishers to be seemingly benevolent and not be losers?

This present volume before us, like its predecessors, is replete with articles on subjects which interest the profession at the present day. We hesitate to speak with more

emphasis of any one article in this volume, but as a matter less frequently met with in medical literature we would call particular attention to Dr. Henry K. Pancost's most excellent contribution on radiography of the gastrointestinal tract. There are many and some quite novel points to be learned from its perusal.

GARROD'S "ERRORS OF METABOLISM"

(Inborn Errors of Metabolism. By Archibald E. Garrod, A. M., M. D. London and New York: Henry Frowde, Oxford University Press. 1909. Price \$1.35.

The subject matter of the six chapters of this little book is organic chemistry. The first chapter, after the striking title of which the whole book is named, tells of many facts in organic chemistry which fully justify the motto on the title-page quoted from Aristotle: "In all things natural there is something to be wondered at." The other chapters treat of albinism, alkaptonuria, cystinuria, and pentosuria. And lest we forget what we may like to remember, there is a good index of eleven pages to help us.

SCHORER'S "SERUM THERAPY"

Vaccine and Serum Therapy. Including also a Study of Infection, Theories of Immunity, Opsonins and the Opsonic Index. By E. H. Schorer, B. S., M. D., of the University of Missouri. Illustrated. St. Louis: C. V. Mosby Company. 1909. Price \$2.00.

A very useful book on scientific medical problems of modern date, much spoken of and not yet fully understood.

DORLAND'S "POCKET MEDICAL DICTIONARY"

American Pocket Medical Dictionary. Edited by W. A. Newman Dorland, A. M., M. D., containing the pronunciation and definition of all the principal terms used in medicine and the kindred sciences, along with over sixty extensive tables. Sixth Edition, Revised and Enlarged. Philadel-

phia and London: W. B. Saunders Company. 1909. Price \$1.00.

This well-known handy dictionary comprises 598 pages of 32mo. size, paper thin yet strong, cream color, print small but very clear, flexible morocco leather, rounded corners, gilt edges. There is an attractiveness about this little volume which is difficult to describe though not difficult to account for. Perhaps it has something to do with the fate of which Horace says, *Habent sua fata libelli*.

"PRACTICAL MEDICINE SERIES"

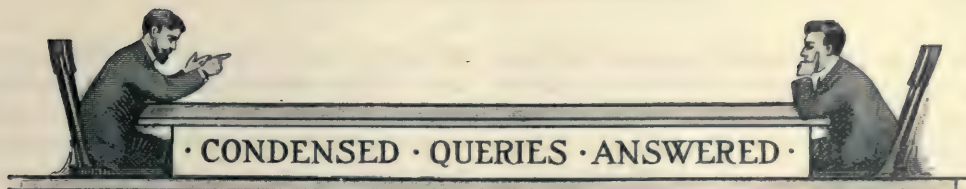
Practical Medicine Series. Volume IV. Gynecology. Edited by E. C. Dudley, A. M., M. D., and C. von Bachellé, M. S., M. D. Series 1909. Chicago: The Year Book Publishers. Price, per volume, \$1.25.

This review of female diseases during the preceding year is very extensive and of great interest in every one of its departments. These Year-Book publications are an immense help to the studious physician who wishes to keep up with the never-ceasing progress of the profession the world over. The price for the full annual set of ten volumes is \$10.00.

HAAB'S "ATLAS OF DISEASES OF THE EYE"

Atlas of the External Diseases of the Eye, Including a Brief Treatise on the Pathology and Treatment. By O. Haab, M. D., Zuerich. Third Edition, Revised. Edited by G. E. De Schweinitz, A. M., M. D., of the University of Pennsylvania. With 101 colored lithographic illustrations. Philadelphia and London: W. B. Saunders Company. 1909. Price \$3.00.

The series of atlases, of which this one before us is a revised third edition both of the German original and the English translation, have gained for themselves an undisputable place of usefulness in medical and surgical practice. It is gratifying to see that the excellency both of text and illustrations have been kept up during these many years undeteriorated. *Esto perpetua*.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

ANSWERS TO QUERIES

ANSWER TO QUERY 5516.—“Hydrocele.” In your December number, page 1400, Query 5516, you give treatment for hydrocele. If you refer to *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* of 1907, page 380, you will find the catgut method described by Dr. Geo. W. Lawrence, of Lakewood, N. J. Since reading that article I have made use of the catgut, according to the method given by Dr. Lawrence, with the best results. My first case in which I tried it I had shortly after reading that article. This man refused an operation and every few months I emptied the sac with the trocar. I now use the catgut ligature and he has no more trouble with the hydrocele.

J. WM. TRABERT.

Lebanon, Pa.

[We suggest that our readers refer to the files of *CLINICAL MEDICINE* for the complete data. Dr. Lawrence inserts a small trocar into the hydrocele, then inserts through it ten to twelve inches of No. 2 or 3 sterile catgut. “After the catgut is entirely through the

cannula and coiled within the sac, remove the cannula and seal the opening with collodion or zinc-oxide plaster.” The catgut must be absolutely sterile. There is little or no reaction, and within three to nine weeks the hydrocele is cured.—ED.]

ANSWER TO QUERY 5512.—“A Galactagog.” I note with interest R. H. W.’s Query No. 5512, in the November *CLINICAL MEDICINE*. I should like to suggest “liquor galactogogue” for his consideration. I have employed the preparation in apparently similar cases, in tablespoonful doses every four hours. Within twenty-four to thirty-six hours a sufficient flow of milk has been established. In some cases further medication was not required. In others, one or two tablespoonfuls daily has maintained a normal flow of milk. It is undoubtedly not a specific, yet I have used it in a number of cases without failure.

WM. V. GALE.

[Will someone tell us something about this preparation?—ED.]

QUERIES

QUERY 5525.—“The Old Dosage Question Again.” W. W. S., New Mexico, writes: “Regarding cypripedin and scutellarin, the dosage and method of administration as given in the ‘Digest’ and (page 204) ‘Alkaloidal Therapeutics’ are (at least, inferentially) contradictory; certainly, when taken together, ambiguous.

Cypripedin and scutellarin are entirely harmless (nontoxic) concentrations; 1-12 grain of cypripedin or 1-6 grain of scutellarin represents the smallest known-to-be-effective dose for an adult. A basal idea of positive therapeutics is the frequent repetition of such a dose to effect. Naturally, with certain drugs and where pronounced action is de-

sired, we increase the dosage, giving two, three, or even more granules at a time. "A" will require one, "B" two, and the conditions present in "C's" case may call for four granules. Had you only the larger dose you would be giving "A" too much. It is very easy to give two or three 1-6 grain granules, but not to cut up 1-grain granules!

All this has been tried out not once but many, many times and, as we have already pointed out, the most satisfactory method is to have as a standard "the smallest known-to-be-effective" quantity of the drug; this can be repeated or added to as occasion may demand. Where you give two antispasmodics together you give the smaller dose of each as a rule, though in some instances we do not hesitate to give large quantities of each remedy. The conditions present in the individual control dosage. In ordinary conditions we should give two doses of cypripedin, gr. 1-6, three to six times daily. Here and there, for the first day or two, we should give as much as a grain. The dosage of scutellarin is practically the same, but it is rarely desirable to give less than 1-6 grain even to children, so the standard granule is 1-6 grain. You will find many minor conditions existing in which 1-12 grain of cypripedin at somewhat frequent intervals will give you better results than larger doses. The value of the "small dose to effect" is gradually being recognized.

In considering the alkaloidal granule, Doctor, please bear in mind the fact that the smallest dose listed is considered the standard granule, i. e., the smallest known-to-be-effective dosage. The smallest dose for an adult may be regarded as the usual full dose for a child over five. The positive therapist recognizes no arbitrary maximum or minimum dosage—just a definite, effective quantity of an always equally active remedial agent is administered at short intervals *to effect*, remedial or physiological. A moment's study and you will begin to grasp the wonderful simplicity and limitless possibilities, and then, Doctor, *the results* one obtains.

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 QUERY 5526.—An "Anti-Vomiting Tablet." J. Y., Rhode Island, sends us a tablet-

triturate and asks us what it contains. He says: "This tablet is used by a neighboring doctor in vomiting of children, with great success. What is the best treatment for this condition? What is the best hypnotic for children?"

We are unable to identify the tablet-triturate. There is a certain amount of menthol and saccharin in the tablets; further than that we cannot state.

Vomiting is, of course, a symptom, and in order to control it we must recognize the underlying cause. Cerium oxalate is an excellent remedy in the vomiting of pregnancy and in "acid dyspepsia." Menthol is another useful agent. Small doses of codeine or morphine are given by some practitioners, but, as we have already pointed out, this is generally poor practice. We must, if at all possible, remove the cause of the vomiting. An emetic and high enema will often stop obstinate vomiting. Indeed it will almost always do so when of gastric origin.

Do not forget that psychic (recurrent) vomiting affects children, usually between the second and twelfth years. Attacks may come on every few days or at several weeks' intervals. Such vomiting is probably of nervous origin, though the excessive formation of urea and general disturbance of metabolism may be the cause. It has been pointed out by observers that the ordinary ratio of urea to uric acid, 54 to 1, becomes early in such attacks as high as 150 to 1. The vomiting is continuous and dynamic in character. Some children state that they have a "crawling feeling" in the epigastrium.

There may be fever; the tongue is slightly coated; vomited matter is at first of an ordinary character, later mucus and bile with streaks of blood will be noted in the vomitus. Its reaction is acid; food or water is instantly rejected. The retching is extremely violent when the stomach is empty.

It is not always easy to distinguish cyclic vomiting from the variety which accompanies meningitis or the exanthemas. Read Candler's "Every-Day Diseases of Children;" the chapters on diseases of the stomach and bowels are well worth many times the price of the volume. Small doses of

cinnamon water and the application of counterirritants over the pneumogastric and epigastric region are to be recommended. Minute doses of cocaine serve the writer excellently. In all these cases a few divided doses of calomel and podophyllin followed by a saline flushing will prove efficacious.

To produce sleep in children with drugs is mostly not a desirable procedure. The healthy child will sleep without opiates. However, *passiflora*, *hyoscyamine*, *veronal*, elixir of red poppy leaves and *scutellarin* may be tried where indicated. In our own practice a sponge-bath and a few doses of the "calmative" formula work perfectly.

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 QUERY 5527.—A Case of "Dropsy." J. R., North Carolina, is treating a case of dropsy and asks whether we can suggest anything that will help move the water.

Dropsy, Doctor, is a symptom and before any positively effective treatment can be instituted we must know something, at least, about the underlying pathology. Give us a clear clinical picture and, if possible, send a specimen of urine, four ounces from the entire amount passed in twenty-four hours, stating total amount passed in that time.

In the meantime do not forget the efficacy of *elaterin* as a *hydragog cathartic*. Grain 1-67 to 2-67 may be exhibited hourly until watery stools are secured, maintaining effect with *apocynin*. Continue for two or three days, rest a day or two and repeat if the patient is fairly strong. We usually give 1-12 grain of *apocynin* every two hours. Keep the skin active with daily hot epsom-salt sponge-baths. Give small doses of blue mass and soda, with *euonymin*, *leptandrin* or *podophyllin* (as may be indicated) every second or third night. Maintain heart action with *cactin*, *digitalin* or *scillitin*, or combine the first- and last-named drugs. Begin with a small dose and increase until the desired effect is obtained. We shall be pleased to serve you further.

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 QUERY 5528.—"Diabetic Gangrene. Whitney's Reagent. Injection Treatment of Hernia." C. F. A., New York, asks for information in regard to the treatment of

diabetic pains and diabetic gangrene, and the reliability of Whitney's reagent in quantitative estimation of sugar in urine. He also desires the experience of the editor and readers of the journal with the injection method of treating hernia and hemorrhoids. "I wish all who have had experience with these things would 'speak up' and give their experiences or unbiased opinion on them."

For the quick and (to all intents and purposes) accurate, quantitative test for sugar in urine Whitney's reagent is one of the best, if not the best solution. Great care must be taken not to drop it into the suspected specimen too quickly. To obviate any inaccuracy this might cause, a medicine-dropper should be used and the urine should be diluted with a known quantity of water.

Of course if the bottle is left unstoppered the reagent will naturally become inaccurate since part of this accuracy depends upon the ammonia present in the solution and this would naturally evaporate if left to do so. For a quick, accurate test we can recommend nothing better.

In order to *properly* consider the subject of diabetic gangrene, pains of diabetes, etc., it would be necessary to write an extensive article and any modern textbook will give you all the necessary data.

Gangrene may be "dry" or "moist," the term being used to describe a putrefactive necrosis, which may be caused by an injury, (mechanical or chemical) or arrest of circulation in the affected area (thrombus or embolus). Under such conditions saprophytic bacteria invade the parts and destruction progresses rapidly.

Dry gangrene is usually the result of obstruction of an artery and presents on some portion of the body where the collateral circulation is insufficient. We find this form in Raynaud's disease, ergotism, the advanced stage of pellagra, in the very old (occasionally) and, rarely, as a subsequent condition to a primary moist gangrene.

Moist gangrene affects the extremities of the diathetic. It often follows the closure of a vessel of any size by neoplasms, cicatricial bands, torsion, etc. Moist gangrene of the lungs develops after thrombosis

or embolism of the pulmonary vessels. In dry gangrene the affected tissues become black and mummified and separation takes place slowly. In moist gangrene the affected area becomes congested, reddish brown, softening takes place, the tissues not infrequently become emphysematous owing to the presence of gas-forming bacteria. An area of inflammation (demarcation line) always separates the gangrenous area from the healthy tissue and there is also a zone of coagulation necrosis varying widely in extent. The gangrenous tissue may liquefy, be cast off *en masse* as a slough or sphacelus, or become encysted. Dry gangrene may supervene and very slow suppuration of the parts result. A fatal toxemia frequently follows.

Diabetic gangrene being especially serious the treatment must of necessity vary according to the conditions present in the particular case under consideration. In diabetic subjects there is obstruction of the smaller vessels. The tibial arteries are especially liable to degenerative changes. In almost all diabetic patients presenting gangrenous conditions we usually find calcareous thickening of the intima of the tibial artery. There may also be more or less cardiac hypertrophy and high pulse tension. The superficial arteries will be hard and twisted.

More men than women suffer from diabetic gangrene, the patient as a rule experiencing cramping pains in the affected limb; a sense of numbness and cold may alternate with heat, formication and a peculiar feeling which is described by the patient as "weight on the foot." Frequently severe cramps occur during the night and the leg becomes bathed in a cold sweat. Later the foot may become insensitive and cold, these symptoms being noted particularly in the morning or after rising from a sitting position. Examination of the limb reveals the skin cold and shriveled, pulsation cannot be detected in the posterior tibial and dorsalis arteries in a large number of cases. The first definite appearance of gangrene will be noted on the large toe; here the skin assumes a peculiar bruised or bluish-red appearance. Later a branny desquamation or even a horny scale may be

noted. Beneath this is an ulcerous area. Blisters containing a foul-smelling or reddish serum next appear. These may break and ulceration become extensive or the superficial ulcers may heal only to break down again in a short period. Occasionally a perforating ulcer is encountered which upon superficial examination appears far from serious, but a careful search will reveal an extensive deep necrosis. By degrees the condition extends to the rest of the toes and foot, its progress being marked by edema.

The line of demarcation may form at the root of the toe across the middle of the foot or at the ankle. In many diabetic patients the gangrenous condition spreads very rapidly. In the earliest stages (before a gangrenous spot has appeared) epsom-salt sponge-baths, massage of the extremity and the exhibition of digitalin, strychnine, cactin and other circulatory stimulants and cardiac tonics will be called for, the limb must be kept warm, scrupulously clean and the patient should be warned not to heat his limbs at the fire or to place them near steam-pipes. Circulation should be maintained by active exercise and wearing of woolen socks. The shoes must be loose and light, and any corns or ingrowing nails should be promptly treated.

Caffeine is unquestionably valuable and some patients are benefited by very small doses of morphine. The writer should use hyoscine, morphine and cactin with pilocarpine and caffeine to effect. As soon as a gangrenous area appears strict surgical cleanliness should be maintained. The affected extremity should be cleansed with an alkaline antiseptic and the part dusted with aristol, bismuth formic iodide or chinolol and be kept elevated and wrapped in cotton. On no account should the foot be heated artificially or be soaked in hot water; neither should ointments be used. Dryness is essential.

Under proper systemic and local treatment the line of demarcation may form and the toe or other area may be removed. In order to secure such results it is absolutely essential that the amount of sugar in the urine be reduced to the minimum. This necessitates

the patient being placed upon a strict diabetic diet. Once the condition spreads to the foot and septic symptoms are noted surgical measures are called for. For technic see any modern work on surgery.

Our method of treating hemorrhoids by injection has been outlined several times. Albright's new book, "Rectal Diseases Treated by Ambulant Method," deals exhaustively with the subject. Success invariably follows intelligent injection of a strong solution of carbolic acid.

The value of the injection method of treating hernia has not yet been definitely settled. The few physicians making a specialty of this treatment seem to succeed in a large proportion of cases but the inexpert operator would be sure to meet with disaster. Special instruments are essential. DePew of Des Moines (originator of the idea) uses a large syringe with a screw plunger which exerts an enormous force, enabling him to inject a specially prepared paraffin at a low temperature. Disasters are usually due to the use of too fluid paraffin.

Those having experience in either line of work are earnestly asked to express their ideas. As the doctor says, "Speak up!"

QUERY 5529.—"Leukoplakia." J. F. L., Missouri, wishes to know what he shall do for a case of leukoplakia, white patches on the buccal mucous membrane of the cheek and tongue. Prognosis? Does it ever degenerate into malignancy?

Leukoplakia is sometimes a serious disease. There is always danger of epithelioma occurring later. You cannot do much better than keep the mouth and buccal mucosa thoroughly cleansed with a solution of oxychlorine or menthol compound. Menthol compound tablet, one; cinnamon water, drams two; water, 12 ounces, makes a useful formula. An antiseptic soap may be used to cleanse the teeth and the gums. A solution of calx iodata (5 grains to the ounce) has given excellent results.

The patches may be entirely removed by applying pure liquor hydrargyri nitratis. The mouth should be stuffed with cotton or other protective and the solution applied to

the lesions with a swab. Allow it to remain for fully fifteen minutes, then neutralize with sodium bicarbonate. Silver nitrate has its advocates and French practitioners apply salicylic acid. We prefer nitrate of mercury or the galvanocautery. If you use the latter cleanse thoroughly with H_2O_2 , boric-acid solution or the cleansing mouth wash mentioned above; then use the galvanocautery. The spots may be subsequently touched with a flat copper electrode attached to the positive pole of the galvanic current; 10 to 15 milliamperes. Keep the electrode moving over the part until it becomes green. It may be necessary to touch the affected area with cocaine first.

Daily applications of pyoktanin blue have been recommended, but the other measures recommended are, we think, more efficacious. Systemic medication must be carefully formulated and with a clear idea of the underlying pathological conditions.

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QUERY 5530.—"Acute Pemphigus." P. H. S., Oklahoma, describes a case which he has under treatment in the local hospital and asks if we can come to any conclusion as to the nature and probable cause of the trouble. "Patient is a female, about 35 years of age, weight about 120 pounds, of Swedish descent; dark hair and skin, fairly well nourished, expression dull; has been in the hospital about four months, insane about fifteen months. About three months ago there developed on the thumb of her left hand a large blister which was filled with a dark and very offensive-smelling fluid. The walls were so thin that they were easily broken and stripped off readily, leaving a raw and granular-looking surface. The thumb healed nicely. Her feet look as if they had been sunburned. This may have been the case, for she sat in the sunshine quite frequently; however, quite a number of other patients who were similarly exposed were not affected as she was. Her appetite is good, she lost no flesh, had occasional diarrhea, but was constipated at times. About a month after her thumb healed a finger on the other hand became affected, also the top of one foot. These blisters also healed readily.

"On last Wednesday, after eating a hearty breakfast, she seemed to lose partially the use of one side and by noon had a temperature of 104°F., which gradually increased in spite of cold baths and cold-pack, until it reached 106°F. We also found a couple of places on the left lower leg which looked like the other blisters, but had been ruptured. Temperature remained 106°F. Thursday another bleb developed on her back covering a surface as large as the palm of the hand; this seemed identical with those on finger and thumb. Temperature remained at 106°F. until some time Friday night, when it began to decrease and a discharge ran from her mouth which had the offensive odor noticed on opening the blisters. Temperature normal since Saturday morning. She is now able to take some nourishment.

"During the time of this high fever the patient had convulsions, but the contractions were so minute that we could only see a twitching about the face; however, by putting the hand on the head of the bedstead we could feel the tremors. Heart action was good, and at no time during the high fever did the pulse run over 80 beats per minute. Since the fever has left her heart action is weaker and more rapid. From Thursday forenoon until the fever began to go down her eyes were drawn downward, pupils dilated and inactive. During convulsions she frothed at the mouth and breathing was shallow and rapid. Bowels and kidneys seemed to act free enough during this time."

This is unquestionably a case of *pemphigus vegetans*—*pemphigoides maligna*. We were at first inclined to look upon it as a *pompholyx*, but the gravity of the systemic disturbance leads us to give the preference to *pemphigus*. The buccal lesion is diagnostic, the fluid which ran from the mouth of this patient having its origin, unquestionably, in a ruptured bleb. The extremely unpleasant odor in *pemphigus acutus* has been noted by several authors, and Hyde had under observation four adults exhibiting classical symptoms, one patient, a young woman, dying in a week after the onset of the attack.

You do not describe a "halo" as being present about the lesions. This usually ex-

ists. The febrile process is marked and signs of grave prostration are almost always present. The contents of the blebs are sometimes purulent, occasionally hemorrhagic, more rarely gangrenous. The origin of the disease is questionable, but marked derangement of the body-chemistry invariably exists. An extreme acidosis has been noted. It would be interesting to examine the blood and urine of this patient, and if another attack occurs the contents of a blister should be secured and forwarded to the laboratory for microscopical examination.

Albuminuria usually exists in cases which terminate fatally; indeed a considerable quantity of albumin has been found in the urine of several individuals presenting *pemphigus* of an acute type. The fever may be continuous, remittent or intermittent. The extremities and trunk are chiefly involved.

You will find a very interesting chapter upon this disease (as also upon *pompholyx*) in Hyde's new work on "Diseases of the Skin." As *pemphigus* is a recurrent disease another attack may be expected. The evolution and involution of a single lesion may be accomplished in a few days, but occasionally successive eruptions may extend through weeks or months. One of the peculiarities noted in this case is the low cardiac rate during the period of maximum temperature.

Inmates of asylums—and the insane generally—are, as you may be aware, particularly liable to this and other dermatoses.

Not infrequently they present themselves in anomalous forms and a definite diagnosis is not easily arrived at. Autotoxemia and insanity are, unquestionably, very closely related, and the medical director of a state asylum recently stated to the writer that half the patients in his institution could be materially benefited—if not cured—by the persistent use of the alteratives and eliminants indicated in each particular case. The chemistry of the living body is, unfortunately, complex, and the average physician knows little or nothing about the subject. Naturally his treatment of the "effects" of an unrecognized cause is not likely to be particularly effective.

QUERY 5531.—“Psoriasis. Urethral Hemorrhage.”—F. H. C., Iowa, asks help in the two cases described herewith.

“Case 1. Mrs. S., aged 35, farmer’s wife, mother of three children, youngest one three years old. No history of any sickness since childhood. Alimentary canal clean, appetite and digestion good. Urine tests negative. Came to my office with four finger-nails on one hand black, one-half the way back from the free edge. One of these nails and one on the other hand are rough, black and slightly thickened, and there is a low-grade inflammatory process of the nail-fold of epidermis and the nail-skin; this discoloration had started at the free edge and had gradually worked backward. In all, except the two mentioned above, the nail-fold of the epidermis, the nail-skin, the matrix and the lunula, all seemed healthy and natural. The blackened nails seemed a little more brittle than natural; they grew very slowly, and as far back as the nail was black it seemed loose from its bed. There is no other skin lesion present nor is there any history of such lesion previous.

“I made a diagnosis of scleronychia, and prescribed a thorough soaking of the finger-nails each evening in a strong solution of boric acid, followed at bedtime with ichthyol worked into the skin and between the skin and nails. I also advised her to keep her hands out of water as much as possible. She isn’t improving much. What more can I do for her? Is my diagnosis correct? What is the prognosis?

“Case 2. Mr. W., aged 40. Began, a year ago, passing blood. It is not bloody urine, but pure blood, bright and red. The urine will sometimes follow the blood and sometimes for several times blood clots will pass away with the urine after the pure blood has passed. These attacks at first were several months apart, now they are becoming more frequent. The last two were only two weeks apart. This blood passes without any pain or warning of any kind. He will have a desire to urinate, and then instead of urine blood will pass. In fifteen minutes he may again feel a desire to urinate but pass clear urine. He has never had urethritis or

cystitis. The urine tests show specific gravity 1015, slightly acid, no albumin, no sugar. Prostate gland only slightly enlarged. He is a very strong man and otherwise well. I do not know of a better place to go for help than to yourself.”

In case No. 1 you probably have a psoriatic condition to deal with. Carefully examine the body for confirmatory lesions. In psoriatic affections of the nails the first symptom occurs in the distal portion; in eczematous and also in atrophic diseases changes occur at the root. In the initial stages of psoriasis of the nails the margin of one or more nails becomes loosened, discoloration occurs, and a thin (often necrotic) granular mass will be noted between the nail and the bed. The nail becomes friable and thickened, and in many cases more or less inflammation of the matrix is observed. Yours does not seem to be a case of atrophica unguis.

Onycholysis occurs frequently without recognizable cause although as a rule the patients suffer from some grave neurosis or wasting disease. The nails of one or more fingers become discolored, misshapen and separated from their approximal attachments.

Onychitis must be considered. There may have been an infective or inflammatory condition of the matrix of sufficient intensity to produce the changes described by you.

It would be interesting to have the scrapings from the nails examined. It will be essential to have the urine examined also.

Eliminate, improve nutrition, push the arsenates with nuclein, and soak the ends of the fingers in a carbolated solution of magnesium sulphate (2 ounces to the quart, adding pure carbolic acid, 20 minims). Then apply sulphur ointment, or flowers of sulphur may be dusted into finger cots and placed on the affected fingers.

Hemorrhage from the urethra, especially when red blood follows the urine, is frequently due to rupture of vessels about the orifice of the bladder. Prostatic hypertrophy generally exists. You should examine this patient very carefully, if possible by reflected light. It is possible, of course,

that a calculus exists, but from your description we conjecture that there is a marked congestion with possible erosion of the vesical neck. Injections of hamamelis and the free administration of arbutin, hamamelis, and collinsonin suggest themselves. Oil of erigeron may also be given in small doses.

We should very much like to have a specimen of this patient's urine. And a succinct description of rectal, vesical, urethral and prostatic conditions as revealed by a thorough local examination. Be extremely careful when inserting instruments, take every precaution to secure—and maintain—asepsis. Is there any possibility of venereal, tubercular or cancerous taint? Have any sounds or instruments been used? Does the man complain of any pain in the renal, vesical or perineal region?

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 QUERY 5532.—“Papular Eruption During Menstrual Period.” W. H. R., Ontario, asks us to outline treatment for the skin eruption which appears at the menstrual period in so many women; just small rough papules, showing very little inflammation, and appearing mostly on the face over the cheek-bones, especially before menstruation, and generally clearing up shortly after the flow commences. In many cases, however, this eruption does not disappear quickly, but has scarcely vanished when the next attack begins. There seems to be absolutely no abnormality in the menstrual period in the majority of cases aside from this unsightly facial rash.

This is an extremely interesting subject and one, moreover, which merits more attention from the “family doctor.” Some women suffer intense mortification from these “periodical acnes.”

A course of hepatic alteratives and eliminants, with perhaps, a circulatory equilibrant for a short period prior to the menstrual period usually controls the milder forms of eruption mentioned. Such patients may advantageously receive iridin, alnuin and juglandin three or four times daily for two weeks preceding the catamenia. Sulphur and podophyllin in 1-6-grain doses after dinner and supper often prove effective. A

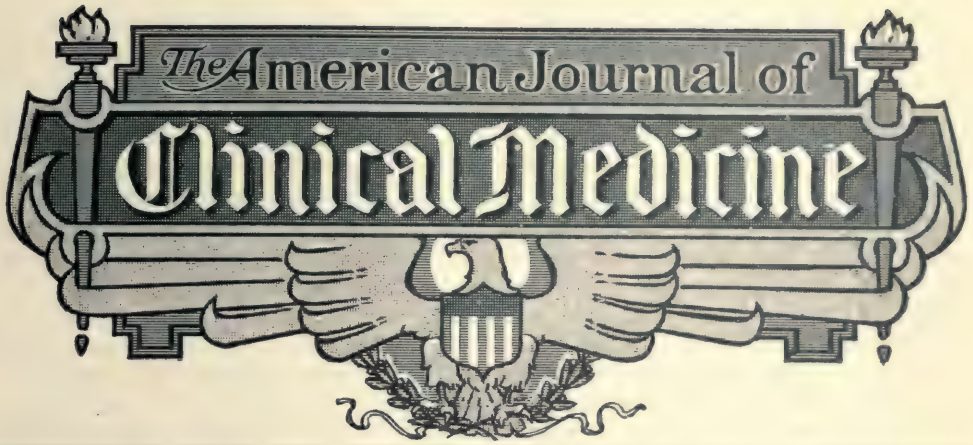
morning laxative saline draft for a week before the period is almost essential and must not be neglected.

Ovarian and uterine congestion, if a feature, must be corrected, while a sluggish circulation is to be improved by the use of strychnine, cactin, digitalin, etc. Attend carefully to the digestion and, in all cases, examine the urine for hyperacidity, insufficient urea, and for indican.

Have the skin washed with carbenzol or similar antiseptic soap; instruct the patient to “dab” it dry, not to use friction or a very rough towel; the soap should be used only once a day. At night the skin may be “dry-cleaned” with almond meal. Many of the toilet-creams on the market are harmful.

The causes of acne are numerous and often extremely obscure. Those who insist upon its parasitic origin insist that the soil must be favorable before the bacteria will invade the individual. Certain systemic conditions favor follicular disorder, and it is not at all difficult to imagine abnormal secretions as affording desirable culture-media for bacilli. Acne, as we know, troubles the cachetic or plethoric; so, also, dyspeptic or constipated people are prone to suffer from it in some form, while at the approach of puberty, when the system is undergoing a profound change, this eruption nearly always makes its appearance. Women whose faces ordinarily are “free from pimples” are annoyed by their appearance every recurrent month, their general health meanwhile being perfect.

The menstrual type of acne may be either a reflex neurosis or a manifestation of a periodical toxemia. Latent congestion of the follicles probably exists, the change in the circulation and body-chemistry occurring at the catamenial period accentuating the condition. Pus-forming cocci may or may not invade the lesion; where a few papules appear, fade and die away, treatment must of necessity be systemic; if, however, there is retention of sebum and debris with pus formation, local and constitutional medication should be instituted; the latter in most instances to be continued for some time.



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The Art of Medicine

WE sometimes suspect that in our eagerness to master the science of medicine we may not give full attention to the art of medicine. Patients credit us with a knowledge of the science, but they come to us for a demonstration of the art—and if we fail to give satisfaction they set us down as being “too scientific.” Fatal impression—it cuts us off from our fellowship with the people and places us on a pedestal where we are let alone.

The doctor has diagnosed a rheumatism. He hesitates now, because he really does not believe in the power of any treatment to shorten the attack; and yet he dares not say so, for the family would at once call another doctor if he told his real helplessness.

While he hesitates Sairey Gamp suggests nannyberry tea, and asks him if it will do good. He does not *know* this, and so the suggestion is adopted by default. Grandma advises a buckeye to be carried about, and he feels sure this will do no harm, and accepts. The family friend who does not believe in medicine but does believe in the newest fad strongly advises vibration; another urges electricity; a third hydrotherapy;

three more Christian science, Weltmerism and osteopathy; and finally the druggist, strong in his own knowledge of drugs and doctors, whispers that he has combined the seven best antirheumatics, and the result is a dandy!

All these and others make their suggestions out of the goodness of their hearts, for the benefit of the suffering patient, *and because they divine the truth that the doctor does not know*. And, yet, if he only used his senses and his wits, how dead-easy it is.

He might say: “My dear friends, I recognize the kindly motive behind all your advice, and I hope you realize that I am a big enough man to accept gratefully any of your suggestions that I could use; but the fact is that this case requires a very careful treatment that is fully indicated by his symptoms. You see his bad breath and nausea show that his stomach and bowels must be cleaned out; the acidity shows fermentation that must be stopped; the pain in his joints demands salicylic acid; and this is about all the treatment I can ask him to take at once.”

As they see that the doctor knows what he is about they cease to obtrude their own suggestions, and begin to learn something from the Man-Who-Knows.

The Science of Medicine—know it.

The Art of Medicine—practise it.

Do both so well that no competitor, professional or lay, can find room for entrance.

And this reminds me—

The man who employs a mixture of several drugs in the hope that one may hit the mark, or even that the combination may prove useful, is not practising the art of medicine but the art of pharmacy. This is druggists' practice and not physicians' practice. The recognition of disorder in physiologic function and the application of the exact remedies that restore normal function is an art so completely beyond the druggist's ken that he is not even aware that it is in existence. He supposes that a combination of a salicylate with quinine, and resorcin, and guaiac, and rhubarb, and sulphur, since each of these has repute as an antirheumatic, with macrotin thrown in to catch the eclectic and apis for the homeopathist, should just about fill the bill. If each cures rheumatism, who could doubt that all together would cure more cases than either alone? If each of the eight cures 10 percent, can we not cure 80 percent with the mixture?

Quite a natural perception for the druggist; but what about real doctors accepting such reasoning and prescribing the druggist's mixture? Just this reasoning renders the profession helpless therapeutically, and the object of contempt on the part of the drugman, who finds that the little he himself knows about the application of drugs is yet more than the doctor knows.

So to apply salicylic acid, *or* quinine, *or* resorcin, *or* guaiac, *or* sulphur, *or* rhubarb, *or* macrotin, *or* apis, as to give each to the patient who then needs that one remedy, is as we say, far beyond the comprehension of our friend of mortar and pestle as it is of the osteopathist, the suggestioner, the pathist in general who has entered medicine by the short-cut, without spending weary years in traversing the highroad of investigation.

HE'S A FAILURE

Some doctors are full of good qualities, were good students, passed brilliant exami-

nations, and went out from Alma Mater with laurels encircling their brow looking forth with happy anticipation over the world that awaits their coming. Then they don't "come." They linger a time on the horizon and disappear from view. Hunt them up in ten years for a class reunion: One has got a clerkship, one is a loafer, and the third is barely eking out existence in some obscure corner, a poor man, a poorer doctor.

In each instance there is in the make-up a streak of unfitness, a something wanting, the lack of which brings disaster and negates the many really good elements of his character. It may be a lack of push, or an unconsciousness of the truth that a man's abilities are unknown until he makes them known. Laziness bars many from the highest success. Dissipation dims the star of hope and turns aside the steps of many who might otherwise have climbed the hill of fame. With most men it may be summed up as a failure to appreciate the way to success, and to use the means to win it.

The Philistine says that many fail because they lack consecutive capacity. They may startle you with a brilliant flight of fancy, an original idea of lofty meaning, but there it stops. Only exceptional stimuli can arouse the sluggish brain to that height of effort, sustained and thought-directed, that is essential to success. Otherwise his time and his energies are frittered away in trifling employments that mean nothing. The persistent plodder comes out ahead. Once in an age there arises a being who has intuition and industry, who thinks great thoughts and works unceasingly until they take form and body. Then the world has found a new master. But ordinarily the man who succeeds is the worker.

Absolute accuracy in diagnosis is far from being possible. Only the ignorant assert that it is, and only the fools wait for it.—Lawson Tait.

JOHN URI LLOYD ON "ALKALOIDS"

Our friend Lloyd has just issued a pamphlet on "Alkaloids" etc., which is not to be set down as mere commercial literature, published in the furtherance of Lloyd Bros.'

business. It is of much interest historically, giving many details of the early times, when the people revolted against the abuses of the ancient practice, and the day of the "strictly vegetable remedy" began. The incursions of various drug houses are recorded, which introduced lines of extracts, watery, alcoholic and hydroalcoholic, of various degrees of merit, dubbing them "alkaloids," resins, resinoids, etc. Men of high scientific attainments took up these matters, and protested against the attempt to reduce all plant-remedies to one form, and to claim for any one product or educt of the plant the virtues of the whole.

Against such "alkaloids" Professor Lloyd voices his earnest protest. Each plant-remedy, he claims, requires a special treatment to extract and preserve its values exactly as they exist in the parent plant. To assume that an alcoholic extract represents these virtues, in the case of all medicinal plants alike, is monstrous.

The "alkaloids" to which Lloyd has reference are these early, crude preparations, presented at a time when the chemically pure alkaloid of the present day was unknown. Some forty years ago the great Da Costa presented some observations upon narceine; but these are ignored today, because it was impossible at that time to secure such exceptional alkaloids of sufficient purity to afford results of scientific standing. The development of the modern alkaloid is a matter of the last thirty years and dates from the rise of Merck in the chemical world and Burggraave in therapeutics.

With this movement and with the modern alkaloid Lloyd's present treatise has no relations whatever. He is a man of science and learning, not a commercial agent seeking to vaunt his own goods and decry competitors. Indeed, there is good sense, and a dignity that demands respect, even a knightly courtesy, in the way he declares the truth as he feels it to be such, and holds himself above the plane of an interested or prejudiced advocate.

Rereading this pamphlet we should say that Professor Lloyd has no quarrel with the modern alkaloid. He states his belief

frankly, that no single element of any plant fully represents the remedial qualities of the entire plant; and we heartily agree with him. We believe that the early botanic physician who gathered the fresh plant and administered it in decoction got more out of it than any extract or tincture gave him; and we believe the same method would still give the surprising results achieved by these men. Moreover, if one has not the opportunity to get the fresh plants, or if his patient will not take the "tincupful every hour," he can not do better than utilize Lloyd Bros.' excellent line of "specific medicines"—a recommendation that is not so much as hinted at in the pamphlet before us, but is spontaneous with us.

The "alkaloids," resins, resinoids, oleroresins and extracts of the early day, to which Lloyd calls attention, may or may not have represented to a certain extent the virtues of their parent plants. Whatever virtues they themselves possessed were to be ascertained by a study of their effects as administered in varying doses to animals and to man, in health and in disease.

Like the parent plant these misnamed "alkaloids" varied in their remedial effects, with the variable chemistry of nature as exerted during their growth. This variability has been discussed so often that the subject is threadbare. It pertains to Lloyd's specific medicines equally, except insofar as the chemist's art has intervened to standardize nature's variable products by their alkaloidal strength or their physiologic effects.

It is impossible to escape from this difficulty by excluding the principal alkaloids and attributing the plant effect to the others—complex, illy understood and themselves variable in proportion, and hence in total effect—because the plant-complex will *not* act the same with the principal actor excluded. Opium deprived of morphine, nux without strychnine, belladonna without atropine, jaborandi without pilocarpine, are *not* true representatives of the parent plant therapeutically. Nor are the "specific medicines" free from the progressive changes occurring in every hydroalcoholic prepara-

tion—evaporation of the menstruum and degeneration of the remedial principles.

The modern alkaloids depend only wholly on their parent plant for their therapeutic application. We employ atropine, aconitine, veratrine, on account of their known powers of acting on the functions of the human body, applying whichever one we know to be capable of correcting the disorder presented by the patient. The botanic source of the alkaloid has no concern to us; whether the "specific medicine" prepared from the plant will do as much is a matter for Lloyd, or any man who wants to utilize that preparation; it is not a matter of interest to us.

Our practice is based on the nearest approximation to certainties as yet developed in pharmacy or therapeutics. Our line of investigation and development may be parallel to Lloyd's, or the two may converge; there is nothing antagonistic between us. We prefer the alkaloids because their powers have been ascertained by direct experiment by the world's great masters of pharmacology, and corrected and extended by clinical trials. We prefer them because, being uniform (since they are pure chemicals), their effects are always the same. We find no such weighty evidence behind the "specifics," but apart from Lloyd's own great authority their clinical application rests for the most on reports from men of unequal attainments, many not versed in pathology, with observations lacking in scientific accuracy, and wanting in precision and in the checks now demanded in such matters. The fact that a drug was given and the patient recovered may mean much or little. If the drug gets a reputation for doing a certain thing, it will long be given for that one thing, even if really valueless. There is a wide gap between the evidence showing the powers of the alkaloids and that on which rests the employment of the "specific medicines."

That is why we prefer the alkaloids. Nevertheless, we are very far from condemning the "specifics," or refusing full credit to the testimony in their favor. This may not be as strong as that favoring the alkaloids, yet it is enough to justify us in utilizing

these excellent remedies in many instances, and giving suggestions as to their use a full clinical trial, with mind open to conviction.

This is the gospel of labor.
 Ring it, ye bells of the kirk,
 The Lord of Love came down from above,
 To live with the men who work.
 This is the rose he planted,
 Here in the thorn-cursed soil;
 Heaven is blessed with perfect rest,
 But the blessing of earth is toil.

—Henry van Dyke.

MORE TRUST SCHEMES

This is a day of trusts and combinations and now the retail druggist is in the maelstrom of activity. Here and there drug-stores are being woven into great chains, according to trust ideas. For instance, we hear that The American Tobacco Company, which has already picked up hundreds of the most valuable retail cigar stores in the country and is constantly establishing new ones in desirable locations, is reaching out a tentacle for retail drugstores in Greater New York and vicinity. It is said to be doing business now as The Lauer Drug Company, and that it will be operated later as The United Chemists' Company, extending its operations throughout the country.

Another enterprise which seems to have had considerable success is The United Drug Company. The nucleus of this organization was about 34 retail druggists, representing as many cities. Today it is said that 2500 cities and towns are represented in the organization, and the movement is spreading. This company not only has its grasp upon the financial management of the different pharmacists but it is also making a series of medicinal remedies of all kinds which they are to handle and exploit. It has its own "patents," also its own candies, its own watches, its own fountain pens, and many other things usually sold at the drug-store are now put out from its own factories. It is interesting to know just where the formulas for its proprietary preparations come from. The following little item, which we reprint, tells the story:

"Here is the system which started the United Drug Company, and it sounds simple enough: A thousand or more physicians, including the leaders of the profession in America, contributed—*more or less unwittingly* [italics ours]—the prescriptions which they have found efficacious in relieving and curing diseases. These were tested in dispensaries in certain great cities, until there were records of hundreds of thousands of cases, by which the best of the prescriptions could be determined. Then the manufacture and distribution of these prescriptions was begun cooperatively."

Of course a thing like this is a great encouragement (?) to the doctor to send his prescriptions to drugstores, especially to the stores of The United Drug Company and other trust organizations of this kind, which deliberately and openly make it a practice to steal the doctors' ideas in order to turn them into nostrums and (as a mere incident) drive the doctor out of business.

Does such a movement encourage *you*, Doctor, to endorse the get-together program which is so popular these days? Is it to subserve interests like these that doctors are being urged to abandon the custom of dispensing their own remedies—possibly compelled by law to give it up—thus giving local pharmacists (maybe of The United Drug Company variety) a "first whack" at commercializable possibilities in the doctor's brains.

In this connection it may be worth while to read an article in the last number of the *J. A. M. A.* on "The American Druggists Syndicate," another trust-ideal organization, which is uniting retail drugstores into a compact selling organization for the exploitation of its own "patents" and other specialties.

In its own words, "The American Druggists Syndicate places the profit side of the patent medicine business where it belongs"—with the retail druggist. The "A. D. S.," by its own confession, is also engaged in wholesale speculation of the ideas of the physicians who send prescriptions to its stores. Its members are said to be daily compounding the prescriptions of the most eminent

physicians and "they not only compound these prescriptions but they are in daily contact with the patients and thus have an opportunity of watching their results, and those which prove the best by practical tests are forwarded by the druggist member to the A. D. S., and from the thousands presented a competent board of physicians and chemists select the premium prescription and offer it to the public in a ready-made package"—financially interested of course.

Language fails. Why comment at all? We should go no farther except for the fact that the president of the A. D. S. (recently reelected) is also the president of the National Association of Retail Druggists—and it is alleged that the managements of the two organizations are closely allied.

The N. A. R. D., we might add, is very busily engaged in arranging "get-together" meetings with the doctors, in order to win them back to prescription-writing, and the use of the "truly ethical" preparations—in the interest of ethics, "pure and undefiled." The A. D. S. is busily engaged in working over said prescriptions into up-to-date "patents"—saying little about ethics.

Curtain!

Scan your life's work—take it year by year: What did you bring to mankind—what have you added to its welfare—what evils have been bettered because of your zeal—what hearts have you gladdened with a beautiful ideal or warmed with a hope—what sufferers call you blessed—what homes are brighter because of your charity—what souls are stronger because of your philosophies?

BURGGRAEVE'S MISTAKE

I have been studying the works of this great Belgian, tracing the progress of his labors from the inception of his reform work through its stages, and seeking to determine the causes of its but partial success. Why did he not succeed in convincing the mass of the medical profession of its vital importance and then and there establish the art of medicine on a scientific foundation?

Burggraave was Professor of Surgery in the University of Ghent. Retiring as Emeritus, he devoted his leisure to the medical studies in which his life had been passed. Chance, perhaps, led him to investigate some

remarkable reports on the action of certain drugs as administered in small successive doses, in the treatment of Asiatic cholera, by a physician in St. Petersburg. The results announced were so far in advance of any previously secured that he recognized a new element as entering into the case. This study led him to the discovery of the fundamental principle of scientific prescribing, namely, the recognition of pathologic disorder and its treatment by supplying the agent that directly restored physiologic equilibrium.

Unfortunately he failed to appreciate just wherein lay the chief importance of his work and its revolutionary nature. In developing the corollaries he forgot the theorem. Undoubtedly he was misled by Hahnemann, whose doctrines were then gaining attention; but his principal difficulty lay in the paucity of physiologic knowledge at that day.

Burggraave recognized the importance of direct prescribing, and hence the necessity of uniformly acting remedial agencies that would always exert the same powers; hence he was driven to the use of the chemically pure single alkaloids (and other active principles) and chemicals. He also recognized the use of minimal doses repeated in swift succession until the desired effect was attained. A few basic therapeutic agents he learned to apply, and some of the most frequently occurring pathologic conditions he recognized; however, his therapeutic armamentarium was scantily supplied, and his view rarely departed from the few functional disorders he first learned to detect.

Yet to Burggraave we owe the knowledge that spasm and paresis frequently coexist, and that the remedies for both may be administered simultaneously and act selectively, and not antagonistically. Hence we find his prescriptions of hyoscyamine and strychnine, or of aconitine and digitalin, repeated times innumerable. And so frequent are the pathologic conditions to which these combinations apply that it is difficult to say in any given case that the prescription is not justified.

Too good an observer to overlook a cardinal principle, Burggraave in time got to

recognize the importance of fecal toxemia and the necessity of keeping the bowels free, and so the use of laxative salines became a part of his routine treatment. The value of calcium sulphide in diphtheria was also made known to him, but he never realized the deductions therefrom, or the role this salt was capable of playing in other infections.

The key of his work was the treatment of pathologic conditions as they were recognized clinically by the use of direct remedies accurately fitted to meet the presenting indications. But he never saw the importance of this, or realized that it was a revolutionary discovery. To him it appeared so simple a matter, so much a matter of course, that he failed to comprehend that to the bulk of the medical profession it was altogether incomprehensible, and that they neither knew how to see pathologic disorders or to apply remedies so as to cure them and restore physiologic equilibrium. Men who had all their professional lives been accustomed to level their formulas at the name of the disease could not get out of their ruts so easily. On talking to an unusually intelligent and successful practitioner lately, I received the sad reply: "It is simple and easy enough to you, Doctor, but I can not get the hang of it."

Burggraave never could understand why this simple and obvious matter was not at once universally accepted without discussion. He forgot the influence of ingrained habit, the distrust which is ever shown to innovators in medicine, especially if their ideas are revolutionary and the suspicion aroused by Hahnemann's founding of a separatist sect. Burggraave grew impatient and angry, and railed at the profession as represented by "the School," and this quickly crystallized suspicion into distrust, so that the profession drew away from him and his ideas. The medical fraternity refused to discuss his propositions, whereupon he protested vehemently against the "conspiracy of silence."

In truth silence was the only weapon that could be effectively employed against him, since any examination of his principles

could not fail to demonstrate their truth. Then the drug trade was aroused to protect its "vested interests," and then as now there were ways of exerting influences. Woe be to him who presumes to disturb the existing order so far as to threaten to relegate expensive machinery to the scrap-heap. The money-nerve is hypersensitive.

This was Burggraave's great mistake, that he allowed himself to be thrown into an attitude of opposition to the profession as a mass and arrayed against himself the instinct of caste. His association with Chanteaud enabled opponents to present his proposition as a strictly commercial affair; but this was of less moment, as it was only by this means made practicable.

The keystone of the arch was the unvarying sameness of the drugs, under the name of each; and the perfected granule, always containing exactly the same quantity of medicament of exactly the same quality, was essential to this exactitude which enabled the physician to use them boldly and yet safely in the emergencies he had to treat. Taking time first to test each new supply of drug meant absolute failure to utilize the new method, and by no other means could the certainty be secured.

The difficulty entailed by the French law giving to pharmacists the exclusive right to dispense drugs led to many inconveniences, as detailed in the early clinical reports, where failures followed the substitution of inferior products or fatal delay was experienced in securing supplies. This later was obviated by taking advantage of the clause in the law permitting physicians to dispense twenty doses at a time; and the granules were put up in vials of twenty each, labeled with the name of the medicament.

To this propaganda Burggraave devoted his fortune and the remainder of his long life. It is to be regretted that his poverty compelled him to descend into commercialism insofar as to peddle his influence among the pharmacists. Had he been made independent and left to disseminate his views without this handicap, it is certain that they would have been listened to with more respect and have done far more good.

The wisdom of those who steadily refused to permit this movement to be sidetracked into a separatist sect is now becoming apparent. All such particularist schools decay. Their journals grow trite and inane. They say their say, and all of it; then having no more to say they repeat, and again repeat. There is no more to be expected in the homeopathist and eclectic periodicals, and they languish. Cut off from the body of the profession, they wither from lack of new blood and new soil.

The principles inaugurated by Burggraave are leavening the entire body of the profession, and one can scarcely pick up a journal that has not some good alkaloidal matter written by someone not in any way identified with the movement. Men are growing to think along alkaloidal lines, the student is learning therapeutics from this standpoint, and the new drugs are tested through their active principles. The armies of the world are supplied with the portable, instantly available alkaloids. Scientific experiment in pharmacology is founded on the alkaloids; and the gray-haired veteran learns, from experiments fixing the powers of pilocarpine, how to use—jaborandi.

The world will one day place the statue of Burggraave beside those of Hippocrates and Galen, Sydenham and Harvey, Jenner and Morton, his frailties forgotten, his great work recognized.

There is no defeat except from within. There is really no unsurmountable barrier save your own inherent weakness of purpose.—R. W. Emerson.

LEGISLATING THE DISPENSING DOCTOR OUT OF BUSINESS

You will all remember the Mann bills which were before Congress a year ago, and the "joker" contained in one of them, which would have prevented inter-state commerce in morphine, codeine, cocaine, hyoscine and a number of other powerful drugs, so far as the doctor is concerned, if they had become laws. We fought these bills, or rather one of them, in these columns. It had the strenuous opposition of many medical men, who made their influence felt

through their congressmen, and as a result it was allowed to die quietly.

We wish to give notice now that in all probability this measure will be revived, in some form or other, during the present session of Congress. The bill which will be introduced will aim at a thoroughly worthy object, one whose proper essence has our sympathy and if properly proposed shall have our hearty support—I mean the traffic in habit-forming drugs. These should be kept out of the hands of laymen by all means, and we will join hands in any “square” effort for that purpose; but the interests of the physician, the only man who is competent to judge of when these remedies should be used, and how, should be unhampered. No worthy measure is dignified by sneaking in a “joker” designed to injure the great medical profession.

We wish to urge every reader of *CLINICAL MEDICINE*, therefore, to write to his congressman and ask him to keep on the lookout for bills of this character. Any measure prohibiting or limiting interstate commerce in habit-forming drugs should be scrutinized with the utmost care. Look out for the joker. Insist upon your congressman being alive to the importance of this matter.

These constant efforts to put the doctor who dispenses his own remedies “out of business,” to turn him over to the nearest pharmacist whether he will or not, are mean, unworthy and contemptible. Never will they be successful if they are made in the open. The danger lies in the secret measure, passed while we are asleep. Let us be alive to the danger and “lock the barn-door before the horse is stolen.”

Write to your congressman!

Opportunities correspond with almost mathematical accuracy to the ability to use them.—Lillian Whiting.

CLINICAL PATHOLOGY TODAY

Not so very long ago the surgeon and the internist “guessed” that certain conditions were due to certain things—“medicine can never become an exact science” was a statement so often made as to have become almost axiomatic. Even as late as the last

decade of the last century the hospital which had a microtome and an incubator, with a few stains and a single microscope, was regarded as “strictly up-to-date,” and men who availed themselves of their advantage were regarded as affected by a mild sort of mania, to be tolerated but not approved.

To this day there are doctors who are suspicious of laboratory workers; and it may be possible that too much reliance is placed by some of our leaders upon laboratory methods over the old-fashioned way of “physical diagnosis” by signs and history. Nevertheless, hospitals are being equipped with modern diagnostic apparatus, sometimes so extensive as to be appalling to the uninitiated; and whether we like it or not “laboratory diagnosis” is destined to become more and more prominent during the next few years.

In a recent article (*Merck's Archives*, December, 1909) Dr. O. Hensel, of New York, calls attention to some of the more recent advances in clinical pathology, of great import to the general practitioner as well as to the surgeon and other specialist; embracing recent progress in general pathology, bacteriology and physiological chemistry. And he predicts that “many important problems in medicine will be solved by serological research, and in not so distant a time serological laboratories with specially trained assistants will be found indispensable, either to carry out important tests or to furnish curative sera.” In other words exact methods are taking the place of guesswork, and therapeutic progress is to be based upon precision of dosage, perfect knowledge of pathology and careful laboratory experimentation.

These laboratory investigations promise to lead to most important results in some of the obscure cases in which the question of surgical intervention is of magnitude.

Thus, the Cammidge reaction for the determination of early pancreatic disease (or possibly simple irritation) is now regarded by Kehr of Halberstadt—perhaps the greatest living authority on gall-tract disturbances—as a sufficient indication for immediate operation in cases of known cholelithiasis, “even

where the clinical aspect of the case would call for medicinal or expectant treatment" because implication of the pancreas is far more serious than the primary gallstone disease.

The relation of acidosis to operations is also regarded as one of the recent laboratory discoveries of great value. Serious surgical treatment is not now undertaken, save in emergencies, upon patients with such high acid states of the urine as to indicate faulty elimination through the kidneys, until after the administration of large doses of bicarbonate of sodium for the purpose of rendering the urine alkaline in reaction. If ten grams (150 grains) of sodium bicarbonate daily for two or three days overcomes the acidity the acidosis is of only moderate degree and operation is safe; but if 25 or 30 grains are given each day and the urine still remains acid the administration of any anesthetic will be extremely hazardous. The importance, then, of careful laboratory investigation of the urine in chronic cases cannot be overestimated, particularly when kidney-lesions are suspected to be present.

Again, when fever appears after serious operation the surgeon no longer hastens to open the dressings to inspect the wound. An examination of the blood is first made in the laboratory. This may reveal a latent malaria or another condition explaining the rise in temperature. But if the hematologist reports marked leukocytosis the deduction is that wound-infection is present, providing no other cause of the increase in polynuclear neutrophils is easily discoverable, and immediate examination of the field of operation is decided upon.

Of even more importance is the hemoglobin-percentage. If a patient be brought into hospital showing extremely pronounced anemia, operation is not performed by the careful, conscientious surgeon until a blood-examination has been made, including the estimation of the amount of hemoglobin present. If there be less than 23 percent of the normal—and one cannot determine this by mere physical inspection, however great and extensive his experience—it is re-

garded as impossible to administer an anesthetic safely until the general condition of the patient has been improved.

Many lives are being saved by this preliminary laboratory-work that would have been lost only a few years ago in the craze for operating upon all sorts of cases, regardless of the possibility of increasing the chances for recovery by proper preparatory treatment.

Or it may be that blood-examination reveals a markedly low leukocyte-count. Here, especially in abdominal surgery, the value of our knowledge of scientific therapy is easily demonstrable. By the subcutaneous use of nuclein the resisting-power of the peritoneum speedily may be increased twenty times (Mikulicz) and the general blood-im-poverishment quickly overcome by the intravenous use of nuclein in normal saline solution (Ward and Lanphear). Is not this a distinct gain for modern clinical pathology.

The value of the tuberculin test for suspected early tuberculosis has been fully proven. Now that a rational and successful treatment for tuberculosis is being wrought out, the recognition of the existence of tuberculosis by laboratory methods is destined to play a most important part in the eradication of this plague of civilization.

While there are some who still doubt that the presence of the *spirochæta pallida* in the blood is an invariable accompaniment of early syphilis, there are few who now deny that when this is demonstrable by the hematologist, subcutaneous injection or intravenous infusion (Lydston) of mercury will more promptly eradicate the syphilitic virus than is possible in any other way. Others depend upon the Wassermann or Noguchi reactions for cases a little farther advanced (Wassermann's test usually being negative in the early stage of lues); the Noguchi being preferred on account of its simplicity for laboratories not equipped for the complicated Wassermann technic, and besides being regarded (Hensel) as giving the greater percentage of positive results.

By means of these laboratory examinations many disorders of unknown etiology are now shown to be of luetic origin. The

value of this discovery, from a therapeutic standpoint, cannot be overestimated: the necessity for vigorous antisyphilitic treatment being proven upon the one hand, the useless administration of mercury and iodides prevented on the other—not to enumerate the positive harmful effects of these drugs given in huge doses to patients suspected but not known to be affected by syphilis. This advance alone in our methods of diagnosis is sufficient to make the early years of the twentieth century notable in the history of medicine.

In the recognition of obscure typhoid the recent advances in laboratory methods are perhaps most conspicuous. The diazo reaction and the Widal test may both be negative; leukopenia and absence of eosinophiles may not be conclusive, yet the following method of examination, described by Hensel in the article mentioned, may reveal the presence of the distinctive bacteria of typhoid in the blood: "A bandage is applied from the forearm downward, to include one of the fingers near the tip. The tip is sterilized and then punctured, when the blood will flow freely. Twenty to fifty drops are allowed to fall into a test-tube containing about 5 Cc. of sterilized ox-bile. After an incubation of from 12 to 24 hours (in the vest-pocket or some other warm place) a drop of the bile may be examined for motile bacilli."

Very many other advances have been made of late which cannot be here described: examination of contents of the stomach, of the alvine evacuations, of urinary deposits, of fragments of suspicious growths, etc., etc.—all of exceedingly great importance. These methods of positive diagnosis are puzzling indeed to the graduate of but yesterday; yet they constitute a progress in medical science which, coupled with rational, exact therapy, is destined to place internal medicine in the near future upon the same high plane now occupied by modern surgery.

He who does not keep in touch with these advances is not wholly alive to his own interests nor yet to those of his patients. If "the younger generation" is seriously crowd-

ing the older practitioner in the field of legitimate competition it is because of the advantages derived from laboratory training; or at least of a knowledge of what the laboratory can reveal, coupled with the ability of getting positive information from laboratory-specialists at small expense and little trouble. Today is the day of experiment; tomorrow the day of positive knowledge.

The star of the unconquered will,
He rises in my breast;
Serene and resolute and still,
And calm and self-possessed.

Oh fear not in a world like this,
And thou shalt know ere long,
Know how sublime a thing it is,
To suffer and be strong.
—H. W. Longfellow.

THE QUESTION OF DOSAGE

Take any acute malady, such as pneumonia: What is it that kills the patient? Evidently the obstruction, the pulmonary paralysis. But if one has recourse at first sight to strychnine, and especially if pushing it to a complete arousing of the vital forces, he will prevent the catastrophe. One must not permit anatomopathologic lesions to be established, such as the organicians plead as an excuse for their failure to do or to try to do.

This applies equally to all inflammations; for what is an inflammation but a lack of antagonism between the moderator nerves and the excitor nerves. Fever, due to an excess of viscosity of the blood, is characterized by a conflagration that devours the whole organism if it is not arrested in time by stifling it under the energy of the proper remedy. Under the influence of a physical or a moral cause the heart precipitates its action and launches the blood with a force incompatible with the physiologic state upon the point or the organ whence the excitation came. It is the excitor nerves that overcome the moderator nerves, the pneumogastric—representative of the animal sphere—that is vanquished by the great sympathetic, representative of the vegetative sphere.

What should be done? Enfeeble the organism in general, by bleeding and low diet? But this only increases more and more the loss of equilibrium between the forces of life, and depresses the balance on the side of death. On the contrary, it is necessary to oppose a tight rein to the courser that runs away—the perturbed heart. For this reason Burggraave at the debut of acute maladies employed strychnine, adding the appropriate calmants, aconitine, veratrine, hyoscyamine, morphine, and quinine, combined with arsenic or iron.

One does not give a single medicament, but as many as there are indications to fulfil. These may be general or particular. In fever it may be necessary to lower temperature by the incitants and defervescent—strychnine, veratrine, aconitine—and also to combat such symptoms as pain and spasm by morphine, hyoscyamine, atropine; and to reestablish the secretions by digitalin, scillitin, colchicine. In inflammations it is necessary to fortify the organism in general, while one diverts the nervosanguine flood from the point where it tends to gather and produce irreparable disorders. We arrive at the posology, which is the important point, since on the one side we obtain no effect, and on the other we risk poisoning the patient; for with our energetic medicaments the *quantum satis* should be more rigorous than with other remedies which one measures with the eye, so banal are the prescriptions. What matters a gram or less in a potion known to be inoffensive?

It is for this reason that we proceed by minute doses, repeated at intervals so close that the lesion has not time to establish itself, just leaving time for absorption—fifteen minutes as the average. One may go on thus to the therapeutic effect, regardless of the quantity required. Thus, at the debut of a pneumonia twenty or thirty granules of veratrine may be necessary to induce defervescence. Brémond gave a boy of sixteen forty-eight granules of aconitine to obtain resolution of pneumonia.

When strychnine is combined with the defervescent the effects of the latter will be much more prompt than when it is ad-

ministered alone. In a case of acute rheumatism Burggraave gave veratrine and strychnine sulphate, a granule each every quarter hour for ten doses; by which time the fever had subsided and the rheumatism was reduced to a simple arthritis, easily managed by iodine applications.

What happens if the fever is allowed to go on, under the pretext that it is the result, the necessary one, of the arthritis? The inflammation fixes itself on the histologic organs, generally on the pericardium.

The question is not as to doses maximal or minimal, but as to the curative effect, and this can be fixed with more security if one proceeds gradually. For very active medicaments the granules are dosed at 1-2 milligram each, without reference to age or sex. The resistance to the remedy depends on the intensity of the disease.

Aconitine in a healthy individual may determine aconitism at the second or third granule, but in an acute pathologic state it can be given in doses relatively enormous before it induces relaxation of the circulation and respiration. Tolerance establishes itself gradually, and thus there is no danger, since when the desired effect is induced the remedy is lessened or stopped.

For instance, with a temperature of 104 degrees we give veratrine every quarter hour; when it has fallen to 102.5°, we make the doses every half hour; and as the fever falls the doses are spaced at every hour, and so on. Without a thermometer one may be guided by the general condition of the patient, the moisture of the skin and slowing of the pulse.

From this it results that one need have no fear in employing alkaloids as powerful as strychnine, aconitine and veratrine at the debut of acute maladies, any more than one would in giving quinine for ague, for *every fever should be broken*.

In surgery the gravity of accidents depends on the traumatic fever, but that is not fatal because it can be treated. Chas-saignac instituted for operatives what he called the surgical dissipation (*l'entraînement chirurgical*) by means of aconite given for several days before operation. Helot took the same precaution before a laborious ac-

couchement. So in medicine, where fevers may be foreseen. Niemeyer cited pneumonias brought to resolution without fever, by applying ice and giving veratrine.

While we have faith in the *vis medicatrix naturæ*, we come to her aid. Strychnine is necessary at the debut of acute affections, because it is needed to oppose paralysis of vessels and parenchyma. Strychnine, especially the arsenate, is the vital incitant *par excellence*, which arouses the latent force mentioned by Barthez, and which the ancients recognized when they said that in adynamic maladies the nerve power was bound up in the abdominal ganglions. This force is liberated by strychnine, aconitine, veratrine, hyoscyamine, acting on and calming the vasomotor system. Note the effects of these in acute gastralgia which, without them, would end in gastritis. So in great inflammations, meningitis, pleurisy, carditis, peritonitis, neuralgias of the splanchnic serosa; we must treat them thus, if we do not wish to see the complications that so often render these maladies mortal.

The discovery of the alkaloids has been one of the great facts of contemporary medicine. We are guilty of *lèse humanité* in not employing these agents which chemistry and pharmacodynamics have put at our disposal. Among these we place in the first line strychnine, which is to individualized living force what electricity is to all nature, an incitant of vitality; and without vital force we can do nothing. People have a false idea of strychnine, because it has been badly employed. If given in paralysis without regard to its nature, as in nerve softening, it will provoke electric shocks not within its scope; but if employed in affections purely dynamic or vital especially if given gradually, it does not give rise to any shock or commotion, but tonifies the tissues. It is the king of vital modifiers.

MORBID SENSIBILITY

We are convinced that the great majority of those complaints which are considered purely mental, such as irritability and shortness of temper, gloominess, melancholy, irresolution,

dispondency, and so on, might 'e greatly remedied, if not entirely removed, by a proper system of temperance and a little of the right kind of medicine. For this reason medical men often have it in their power to confer an immense boon upon many valuable members of society whose lives are rendered wretched by the morbid sensitiveness of mind but having its unsuspected source in a morbid sensibility of the stomach and bowels or the nervous system.

From numerous facts, indeed, which have come under the observation of the writer of these notes, there is no doubt that many strange antipathies, disgusts, caprices of temper, and eccentricities which are considered solely as obliquities of the intellect have their source in bodily disorder.

By a temporary gastric derangement many an enterprise of importance has had its "current turned awry." The philosopher and the metaphysician who know but little of these interrelations of mind and matter have drawn many a false conclusion from and built up many a hypothesis upon the actions of men. Many a happy and lucky thought has sprung from an empty stomach! Many an important undertaking had been ruined by a morsel of undigested pickle. Many a well-laid scheme has failed in execution by a drop of green bile. Many a terrible edict has gone forth in consequence of an irritated gastric nerve. "Clean out, clean up, keep clean."

Nothing is so contagious as enthusiasm. ¶ It is the real allegory of the tale of Orpheus. It moves stones, it charms brutes. Enthusiasm is the genius of sincerity and truth accomplishes no victories without.—Bulwer.

DRUNKENNESS CONTAGIOUS

A few years ago a man who had made a lifelong study of alcoholism advanced the proposition that drunkenness was contagious! Men who had no notion of getting drunk fell in with roystering comrades, the microbe was transmitted from man to man, and all got drunk together. A great horse-laugh went up, and the matter was not taken seriously. Nor did the propounder of the argument mean it to be. But it directed

attention to the question of alcoholism, and that was his object. It aroused thought in men who had given none to this topic.

There is contagion in drunkenness, and if similar conditions existed as to any febrile malady, the fact of transmission would not be questioned. Thought and emotion are contagious. Let any man propose to hang a rapist, and a thousand hitherto peaceful, law-abiding citizens are in an instant transformed into a frantic, howling, rabid mob of life-takers.

Let a man in a theater raise the cry of "Fire!" and men trample down women and children and fight like maniacs in the wild rush for the exits.

And then—

When the Trenton was caught in the resistless grasp of the hurricane at Samoa and swept down to certain destruction she had the usual crew of a United States man-of-war; natives of every country in Europe and some from outside of it, gnarled old Scandinavians, stalwart Germans, phlegmatic Hollanders, swarthy Spaniards, agile Frenchmen, jolly Irishmen and canny Scots, passionate Welshmen and stolid English, with a backbone of cool, shrewd Americans. But not a Portuguese fell on his knees and invoked the saints, not a "Guinea" became panicky, not a boy rushed to the boats. Every man remained quietly at his post, the band playing, the men standing at quarters, silent, attentive, ready to respond to any duty.

When the Light Brigade made that wild ride to death and immortal glory, there was the excitement of battle to key the men up for the quick dash. The Trenton's crew faced death without the chance of striking back; not a glorious ride, but quietly standing till the end should come, and not a skulker among four hundred. No laureate immortalized them; in truth, very little notice was taken of the occurrence, for the simple reason that America expects just such discipline from her navy at all times as a matter of course, and gets it. Speak a word of appreciation to one of the heroes of the occasion, and he looks at you much as any ordinary man would were you to congratulate him on having kept out of jail.

Heroism, fear, rage, are emotions that are indeed contagious, and may be imparted by one to multitudes in an instant. And it may be either.

During the Civil War a volunteer was elected lieutenant—to his great annoyance, for he knew he was a coward and would run at the first trial. The time came. The regiment was drawn up in battle array, under fire. In time an opposing line made a charge upon it. The lieutenant saw the line of gray with its shining bayonets coming nearer, and at last found he could not stand it a single moment longer. Flinging down his cap he yelled to his men: "Come on boys, let's meet them half-way!" and started to run, full speed, *toward* the advancing enemy. With one wild yell the regiment took after the officer, the countercharge broke that of the enemy, and at the next dress-parade the lieutenant was promoted for gallantry on the field of battle.

But if this officer had not run *toward* the enemy he would have run *from* him—and the regiment would have followed! Contagious? Well, rather!

The physician who does nothing but expect, is like the general who sits still till the enemy comes to beat him.—Burggraev.

LIFE AT HIGH PRESSURE

There is one peculiarity about the daily life of the people of this country that is more marked than in the other races, that is the high pressure at which all classes of the community appear to live. Feverish haste to amass wealth, struggles for preferment and promotion, work to retain a certain position if not to improve that position in society, the rush after pleasurable excitement, all these combine to create impatience and unrest in the human mind.

The mind of such a person soon gets into a certain groove from which it becomes impossible to extricate itself, and very soon insomnia, nervous prostration and concomitant results follow, so that the victim, conscious of his utter hopelessness, is compelled to take an absolute rest in order that his nervous system may regain its equilibrium.

Nature is not to be trifled with; she is certainly very patient of neglect; but of one thing we may be perfectly assured and that is, sooner or later she will assert her rights, and that with no uncertain voice. She warns by aches and pains. Then narcotics and stimulants are resorted to to make us forget the monition, until the strain can be borne no longer and there is a collapse.

Another cause of this sudden giving way of vital forces is to be found in the never varying treadmill kind of life so many of us lead year after year, without a change, with nothing to relieve the dread tedium and monotony. Examples of such affronts to nature in the violation of the most simple rules are unfortunately only too numerous, and every doctor has patients whom he knows nothing but absolute rest and change of scene can cure. It is surely time that the "whip and spur" were laid aside, that there should be a cessation of this hurry and drive which, as we have pointed out, can only lead to one inevitable result.

THE STORY OF THE PEANUT SHELLS

As everyone knows, C. W. Post of Battle Creek, Michigan, is not only a maker of breakfast foods, but he is a strong individualist who believes that the trades-unions are a menace to the liberty of the country. Believing this, and being a "natural-born" scrapper for the right, as he sees it, Post, for several years past, has been engaged in a ceaseless warfare against "the Labor Trust," as he likes to call it. Not being able to secure free and untrammelled expression of his opinions on this subject through the regular reading pages of the newspapers he has bought advertising space for this purpose, just as he is accustomed to for the telling of his Postum "story," and he has thus spent hundreds of thousands of dollars in denouncing trades-unionism.

As a result of Post's activities the people now know a whole lot about these organizations: how they are honeycombed with graft, how they obstruct the development of legitimate business, curtail labor's output, hold up manufacturers, graft upon their own

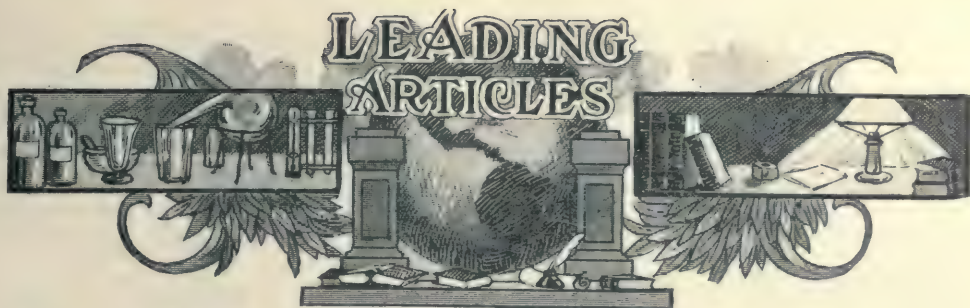
membership, and rob the public. Naturally Post is hated by the trades-unionists, and intensely. He employs no union labor, so they can not call out his men, and he defies their efforts at boycotting his products. The latest means of "getting" Post is the widespread publication of the story that a car which was recently wrecked in transmission was found to be loaded with empty peanut shells, which were being shipped from the south to Post's establishment at Battle Creek. This canard probably originated with President John Fitzgerald of the Chicago Federation of Labor, who, it is said, stated it publicly, as truth.

Post comes back and gives Fitzgerald the lie direct. He denounces Fitzgerald's statement as a deliberate falsehood, an underhanded and cowardly attempt to injure his business, having not the slightest basis in fact. As such an effort it must be regarded. It is significant that this statement about "the peanut shells" is being given wide newspaper publicity. In the "patent inside" of an eastern country paper I find it, and the inference naturally is that labor-unionites are insidiously spreading this lie.

An institution (or a man) which will resort to moral intimidation and to physical force, that will destroy machinery and burn buildings, that will maim and kill if necessary to effect its ends, naturally would not hesitate to spread falsehood for the same purposes.

We admire Post. While we have no enmity toward labor unions, so long as they are conducted in an honest, "live-and-let-live" kind of a way, we have had enough of the tarred end of the stick to sympathize thoroughly with what he is trying to do. He deserves support. A man like Post can not be killed, even with lies. They are a boomerang, every time. Again we *know*, for hasn't this weapon, every weapon that could be thought of, been used (and not simply by labor unions) to put us out of business too?

I am going to drink *two* cups of Postum every morning from this time on, and put myself on a diet of Grape Nuts. Bully for Post!



Alkaloidal Therapeutics

*A Toast, Read at the Fifty-Sixth Annual Meeting of
the Thurber Medical Association*

By C. H. RANDALL, M. D., Franklin, Massachusetts

IT is not only a source of extreme pleasure to me to be present upon this occasion but I regard it as an exceptional privilege and a distinctive honor to be assigned a part in the program of this annual reunion of the Thurber Medical Association.

I am forcibly reminded of the introductory remarks of that great natural orator and champion of the colored race, the late Frederick Douglass, in a speech delivered upon the occasion of an immense gathering at a soldiers' and sailors' mass convention, assembled in the interest of General Grant's second election, following the speeches of a galaxy of the heroes of the civil war and able statesmen of the times. He said:

To Give Color to the Occasion

"After having listened to the able gentlemen who have preceded me, enlightening your understanding, convincing your judgment and charming your senses with their witticisms and bursts of eloquence, it is not without great diffidence and many misgivings, that I shall undertake to address you, and it is only through the most earnest solicitation of these my friends upon the platform that I have consented to do so. But for what reason my presence has been so eagerly sought, or what purpose I am to serve I cannot understand unless it is to give 'color' to the occasion."

I can assure you that it is not without many misgivings and great embarrassment that I shall attempt to draw the "color-line" between galenic and alkaloidal medication before this learned assembly of physicians. You will not expect me to discuss at length the therapy and indications of special drugs, or to weary you with case-histories or statistical reports.

What Statistics Prove

In this connection I am reminded of the young doctor who, while attending a very critical case, was confronted with grave misapprehensions from his patient, who expressed serious doubts of recovery. The doctor exhausted nearly every argument to reassure his patient, except statistics to which in his extremity he finally resorted. Said the doctor:

"I know you will recover; I can prove it by statistics. *Statistics* show that one out of every one hundred recover from this disease. I have already lost ninety-nine cases. You are the last one of the hundred and there is no possibility of a fatal termination."

Very reassuring to the patient!

Statistics are usually more flattering, if less truthful, when compiled for the purpose of floating some favorite prescription in the interests of the manufacturer than in actual practice. The alkaloidist depends upon the

isolated principle of definite strength and its well-known physiological action rather than upon the voluminous reports gleaned from statistics in the prescribing of some famous combination exploited in the interests of the chemist and pharmacist, with the ready-made compound-dosage to fit all patients suffering from a given malady.

Fitting Drug to Patient or Patient to Drug

The problem which confronts us today as successful physicians resolves itself into the simple question: Shall we fit the patient to the dose or the dosage and drug to the patient's requirements?

A traveling salesman for a large manufacturing drug concern recently called my attention to the "big drive" on the "bargain-counter annex" in Blaud's tablets; and incidentally and impressively announced that he had just sold a million tablets to a neighboring hospital (outside of Massachusetts) which enabled him to make "this offer of a lifetime."

A fearful commentary on the medical staff of that institution—unless the salesman lied. They do sometimes.

I do not refer to this in disparagement of Blaud's tablets, but rather to call your attention to the unlimited, unwarrantable and alarming practice of using stock formulæ in bedside practice. Neither do I deny that there are many elegant, palatable, highly scientific and useful medicinal combinations and preparations that stand as shining monuments to the skill of the pharmacist and the art of the chemist, as well as being a great convenience to the practitioner.

Nevertheless we cannot always afford to introduce the elegant products. The great army of physicians who face the enemy upon the battle-line between life and death pocket their losses and die themselves in poverty and obscurity, while they exploit the products of those who fatten upon their untiring faithfulness to their clientele and sacrificing devotion to professional work and ethical (?) preparations.

I have in my possession a letter written to one of my patients by the manufacturers of T—— who must have learned from the

clippings they were buying through a bureau established for that purpose that my patient had suffered from grip. They urged her to buy a bottle of T—— as the preparation *par excellence* in convalescence from those conditions. And, yet, the manufacturer informs you and me that his specialties are sold only on purely ethical (?) lines! What do you know about that?

But to pass from the discussion of "stock" drug treatment. Isn't it a fact that the identity of many of your prescriptions would be lost in the finished products of two or more pharmacists? Why this disparity? Surely it is not the fault of the druggist, but rather the lack of uniformity in and the absence of standardization of the drugs from which they are compounded.

Some Facts Worth Noting

Isn't it a fact that the import duty on crude opium is reckoned on the quantity of morphine which it yields (ranging from three to sixteen percent—I think the standard is nine) rather than on its gross weight?

Isn't it a fact, that while some grades of calisaya bark yield one hundred pounds of the active principle (quinine) to the ton, it requires five tons of other grades to yield the same amount?

Our friend Mulford lays upon our desk a pamphlet calling attention to a superior tincture of digitalis (or "digitol" as he is pleased to designate it) to show us that it is standardized to an active principle of digitalis, leading off with the startling announcement that the importance of standardizing this drug has been shown by the U. S. Public Health and Marine Hospital Service's Bureau of Hygiene, which calls attention to the fact of a 300-percent variation in the strength of digitalis and a 600 percent variation in strophanthus tinctures.

God pity the poor heart then that must depend upon the U. S. P. tinctures for the support of its strength and the regulation of its life current.

What is the remedy? Alkalometry offers a safe, certain, immediate, easily obtainable and direct pathway out from the misty maze of uncertainty to the great highway of per-

fection in production, precision, potency, and accuracy in application of definite principles.

What is an alkaloid? Alkaloids are principles of vegetable origin obtained by first treating the plants with dilute acids and precipitating the resultant solution with ammonia or some other alkaline substance; hence the alkaline form and term alkaloid.

Certain mixed alkaloidal principles were separated from the opium by two French chemists more than a century ago, to be more exact, I think in 1803; it was not however, until 1816, that Sertürner, a German apothecary, discovered and determined the nature of the distinctive alkaloid which he termed morphium, on account of its somniferent properties, and in honor of Morpheus, the god of sleep. This has passed muster with

all classes of physicians to the present day under the name of morphine, conforming in name to the terminal ending of the other alkaloids, standing today among the twenty or more other active principles of opium. It is found in the armamentarium of every modern progressive physician.

I shall not attempt to discuss its therapy. Suffice it to say that the paternal drug was so complex in its combination, so antagonistic in therapeutic effect, so uncertain in its action, that it was and is too perplexing a proposition for practical use; hence the stimulus to the aspiring chemist to isolate a principle which could be exhibited with safety and some degree of certainty in effect.

Alkalometry, then, from the chemist's standpoint, is the elimination of the inert portions of the drug and the isolation and

classification of each distinctive active principle, resolving the concrete substance into the abstract, classifying those of greater or lesser physiological activity and antagonistic action, and recombining along scientific lines for practical therapeutic application. It was but a step from the first discovery of

the chemist, in his successful derivation of abstract principles from the concrete poppy juice, to give us quinine from calisaya bark; strychnine from nux vomica, atropine from belladonna, digitalin from foxglove, and so on to the end of the list.

The first three, morphine, quinine and strychnine, came into immediate and general use by nearly all classes of physicians.

Of all the alkaloids perhaps none have been more recklessly and inexcusably misapplied than have morphine, cocaine and quinine, especially by

the laity for self-medication.

Among the most useful and important discoveries in alkaloidal combinations of the twentieth century is the happy union of hyoscine, morphine and cactin (to which may be added strychnine if indicated, without fear of counteracting its anesthetic effect), one of the evolutions of alkalometry emanating from the fertile brain of that live, hustling, broad-minded, scientific enthusiast, from the breezy city, one of the early pioneers in this country in the manufacture and intelligent application of alkaloidal therapy, Dr. W. C. Abbott. We admire him as well for his sincerity as for his dynamogenic forcefulness. [Thanks, Brother! —Ed.]

Long live the man whose brilliant genius has placed at our command a combination



DR. C. H. RANDALL

so potent in its action, so harmless in its effect, that it may be used with intelligent judgment, with perfect safety, as we have personally demonstrated, to relieve the writhing contortions of renal and hepatic colic, almost instantaneously; reduce the luxation of a joint, a simple or compound fracture without remonstrance from the patient, victim of the injury; or so assuage the grinding pains and pangs of childbirth, that the expectant mother may calmly survey the latest fashion-plate or resign herself to the inviting arms of Morpheus, as the process of unconscious labor progresses and she floats away into the happy, optimistic dreamland, seeing in the eye of her dreamy imagination a prospective son and heir standing in the highest role of honor among the greatest

surgeons of the world or assuming the duties of the highest office in the gift of the most powerful and progressive nation upon which the sun ever shone, whose loyal citizens are entitled to compete upon equal terms for its grandest achievements, whose glorious ensign is an emblem of hope to the oppressed of every land, honored and beloved by all people of every nation.

The dream is past. The master of ceremonies has completed his work. The embryo of future royal manhood emerges from the environment of its prison walls, and begins to run life upon its own account. The mother is awakened by the sound of a shrill infantile wail, to pay tribute to the achievements of alkalometry—and perhaps—a doctor's fee.

Thiosinamin, the Absorbent of Scar Tissue

A Resume of Reports Up to Date

Compiled by WILLIAM F. WAUGH, A. M., M. D., Chicago, Illinois

Dean and Professor of Therapeutics, Bennett Medical College

BY treating oil of mustard with absolute alcohol and ammonia we obtain allyl sulphocarbamide, or thiosinamin. The chemical formula is $\text{CS}(\text{NH}_2)\text{NHC}_2\text{H}_5$. It appears in the form of colorless crystals, is bitter and of a faint garlic odor, slightly soluble in water, freely soluble in alcohol.

Thiosinamin is an active stimulant of glandular and lymphatic activity. Koliker found that the phagocytes were abounding in scar tissue. However, some hours after a hypodermic injection of thiosinamin a marked fall occurs in the number of leukocytes present; Hebra says, from 14,000 to as low as 4000. This condition is rapidly followed by hyperleukocytosis, which endures as long as the remedy is being administered. Local reactions occur about exudates and transudates, although without general disturbance.

Hebra introduced thiosinamin for use when it is desired to excite local reaction in an inflamed, cicatricial or poorly nour-

ished area, when glandular stimulation is desired, or hyperleukocytosis is indicated. He reported favorably on its use in treating lupus and old cicatrices; also in chronic nonsyphilitic glandular enlargements. An ectropion caused by lupus was cured.

Haus reported favorably on this remedy in urethral strictures, as did Tousey, who found that when aided by the occasional passage of a sound it cured cases usually amenable only to cutting operations.

Lutzko tried it on uterine tumors, old perimetrites and salpingites, finding the softening action undoubted; the tumors often growing smaller. Unna added his testimony as to its efficacy in cicatricial contractions, local tuberculosis and corneal opacities of long standing, which cleared up.

Tousey declared thiosinamin was possessed of positive curative properties in resolving benign and malignant tumors, cicatricial tissues, keloid and corneal opacities. He also urged it for deafness due to tympanic embarrassment by fibrous tissue.

Hubbard advocated this remedy in catarrhal deafness, disseminated choroiditis, diffuse corneal opacity and senile cataract. Unna applied thiosinamin locally for keloid, leprosy and to remove smallpox scars. Neisser obtained good results in scleroderma, as did Juliusberg in scars from lupus and burns. Upon tried it in six cases of chronic joint disease; two were greatly improved, two doubtful, two unaffected. Armstrong reported a cure of epithelioma recurring a scar, from galvanofaradism, and the local use of thiosinamin and guaiacol. Teleky got good results in two old cases of esophageal stricture.

Suker used thiosinamin internally for corneal opacities, cicatricial contractions of the eyelids after trachoma, exudative choroiditis, symblepharon, capsular opacities (postoperative), cicatricial ectropion and plastic iritis. Sherman found it valuable in chronic avascular cicatricial keratitis. Randolph got good results in obstinate tinnitus. Somers found it useful in sclerotic deafness, the benefit being manifest within six weeks if at all. Kaufmann obtained most satisfactory results in a case of chronic gastric ulcer with tumorous proliferation. Renon advised its use in arteriosclerosis.

Thiosinamin Used Successfully in Catarrhal Deafness

Lermoyez employed it in purely adhesive cicatricial or catarrhal deafness. He applied thiosinamin by instillations through the eustachian tube or by irrigation of the canal; the only other treatment was systematic massage of the tympanum. Eight cases were benefited by this method. Every evening the patient's ear received a bath of a hot solution of thiosinamin-antipyrin. Twice a week he practised pneumatic massage of the tympanum. In general, by the fifteenth day there was a decided improvement in hearing, most marked in cases of cicatricial adhesions following cured otorrheas or where a large perforation permitted the penetration of the solution into the tympanum. In refractory cases tubal injections were practised. The solution was neither painful nor irritating when injected. It consisted of

15 parts of thiosinamin, 7.5 parts of antipyrin and 100 parts of distilled water. The solution was sterilized, and only two or three drops were used at a time.

Successfully Employed in Ankylosis of the Knee

A very happy effect of this remedy is reported in *La Province Médicale* as follows: "The case was that of a woman forty-seven years old who, after being attacked with very severe blennorrhagic rheumatism, was left with an absolutely complete ankylosis of the knee and a stiffness of the shoulder-joint and limited motion in the elbow, wrists and fingers. The articular motions of the hips and ankles were also limited and painful.

After the failure of medical and surgical measures, the treatment with thiosinamin solution (in the proportion of 1 in 25, and prepared cold) was instituted. From September 10 to October 3 the patient received twenty-five hypodermic injections, each of 5 Cc., in the abdominal skin, which makes 20 centigrams of the remedy in solution. Immediately after the prick of the first injection the patient felt a taste of sulphur in the mouth, which was disagreeable and lasted for many hours, then gradually disappeared. An amelioration of the joint trouble was felt on the eleventh day from the beginning of this treatment, and though the movements remained limited yet the patient declared the articulations were more supple and their mobilization occasioned no pain at all. The amelioration increased on the following days. On the twentieth day, however, the patient noticed an important and new fact, namely, a particular difficulty in walking, although the articulations had regained in part their suppleness and the pains were very slight. It seemed to the patient as though the muscles were elongated and did not obey as in the past the incitation of the will. The muscles had lost their tonicity but were not paralyzed.

"In this case the action of thiosinamin shows itself both as a real ameliorator of articular troubles and also as having an unfavorable action on the voluntary muscles and the heart-muscle. The patient in this case was

tainted with chronic rheumatism, general arteriosclerosis and latent myocarditis. We shall have to exercise care in cases like these when employing thiosinamin in these instances, not to go beyond the point of relaxing the periarticular fibrous tissues lest we impair the voluntary muscular system."

Pollack writes: "The much-promising name of fibrolysin has been given to a substitute for thiosinamin which latter has the disadvantage of being very painful when administered hypodermically after the customary formula. It can, however, be given perfectly painlessly by employing the following formula: Thiosinamin, 1.0 (grs. 15); distilled water, 5.0 (grs. 75); glycerin, 5.0 (grs. 75). Of this solution 1 Gram (grs. 15) may be injected unhesitatingly into a feeble person and the pain will not be greater than from a similar injection of morphine or may be not more than from the prick of a needle. It may be that the single injection from the formula will produce a weaker result than that from the customary formula, but the advantage is that the injections can be made as frequently as five or six times a week without any drawbacks.

A Rectal Stricture Treated with Thiosinamin

"That the same results can be achieved from the weak solutions as from the stronger is evident from the following history: Patient, a woman 36 years of age; in her third pregnancy in the fourth month; cough for many years; hemoptysis two years ago; first parturition, four years ago, was spontaneous, and the child died soon of convulsions; second pregnancy terminated with miscarriage in the fourth month; patient has complained for a long time of pains in the chest, cough and a lack of appetite. Since three years there has been pain in the abdomen, and obstipation. The patient has greatly emaciated recently. Examination gave the following: Infiltration in both apices of the lungs. Slight feverishness. High-grade stricture of the rectum; five centimeters (2 inches) beyond the entrance of the rectum it seemed entirely occluded. On careful search a small opening was found near the posterior wall in which not more than the point of the

finger could be inserted. The mucosa itself was perfectly smooth and soft; no nodules of ulcers appeared.

"This stricture in the rectum seemed to be caused by a cicatrix, the edge of which was sharp and smooth. With some trouble it was possible to introduce a medium-soft male catheter alongside of the finger as a guide. A quantity of stinking fluid feces was discharged and some solid crumbs, and much more of these came away by flushing beyond the stricture. This procedure was frequently repeated for fourteen days and gave momentary relief, but there was no hope of dilating permanently in this way, for the stricture became constantly stronger and tighter and the introduction of the instrument more difficult—the patient complaining more and more and running down rapidly. An operation was indicated and a surgeon in consultation urged dividing the stricture.

"Then Dr. Pollak decided to make a trial with thiosinamin, beginning with injecting the above-named solution into the gluteal muscles. The first injection was somewhat painful, but for a moment only, while all subsequent ones were perfectly painless and without any reactions, so that the further injections could quite readily be made in the same place.

"The result far exceeded all expectations. After the fifth injection the catheter could be introduced easily and painlessly without the finger as a guide. After the eighth injection a small tube could be used instead of the catheter and the introduction of it with the finger as a guide was accomplished very easily. For the first time, then, after a long time spontaneous fecal evacuations took place. It was found that two more strictures, less pronounced, and some ulcerations existed above the first stricture. The stricture, it must be mentioned, was perfectly smooth. The injections continued to be painless, and the patient could not express wonderment enough at the results, and laughed at her previous anxiety. Four weeks after the first injection of thiosinamin normal conditions of the rectum presented themselves and the injections were

discontinued. The patient evacuated her stools normally and without pain, and that permanently. On the course of the tuberculosis the injections had no influence whatever. The patient bore a living child and unfortunately died fourteen days later of acute miliary tuberculosis.

"Dr. Pollak treated other patients with injections of the same solution for rheumatism and neuritis and always without pain or reactions. In all these the results were good, but he does not give their histories, thinking the one he details perfectly sufficient, and this one deserves well enough to be tested by others in similar cases."

Fibrolysin: Its Advantages

Fibrolysin is a double compound of thiosinamin and sodium salicylate. It has the advantage of quick absorption and freedom from pain and irritation when injected subcutaneously. Herschell speaks quite favorably of it, comparing the effects with Bier's passive hyperemia. In moderate doses the action is elective to pathologic connective tissue, though Lange showed that in toxic doses it induced anasarca.

A writer in *CLINICAL MEDICINE* says that his uses of thiosinamin by the mouth were invariably disappointing. He finds it only valuable when used hypodermically. He recommends a half grain twice a week, gradually increased to three times a week if necessary. Profuse diuresis always follows its use. The appetite improves and the weight increases. Skin eruptions disappear, cardiac lesions improve, a hemic murmur disappearing after three months' treatment. In another case a mitral lesion improved markedly. He found thiosinamin useful in keloid and other cicatricial growths, corneal opacities, lupus vulgaris and lupus erythematosus, glandular enlargements (nonspecific and nontubercular), psoriasis, and urethral stricture. Deformities from burns soften to an astonishing degree.

The Site of Injection

Mendel declared the site of injection immaterial. Plesch, who obtained success in treating Dupuytren's contraction, injected

as closely as possible to the contracted tissue. Urbantschitsch favors intravenous injections as giving speedier results. He chose the larger veins to avoid thrombosis. A peculiar taste and odor is almost immediately perceived after the injection, or the technic is at fault. These occur later after subcutaneous and intramuscular injections. Most operators prefer injections into the gluteal region. Sometimes there is burning after the injection, and this may last for hours. The skin may become yellowish or inflamed or urticaria appear. Painless nodules sometimes form, subsiding slowly. Severe headache and debility may follow for a day. Debility of the limbs, insomnia, nausea, premature menstrual flow, toothache, also fever up to 104°F., have been reported as rare sequels. Waugh noted marked symptoms of heart failure after injections of 5 grains, though 15 grains has been advised as a single dose in Germany.

Contraindications to Thiosinamin

Merck mentions as contraindications the existence of valuable supporting cicatrices, active inflammation (which is aggravated by this drug), and latent tuberculosis; arteriosclerosis in the aged, when it may cause congestion; also otorrhea, present or recently stopped.

Weisselberg found fibrolysin superior to thiosinamin in esophageal stricture. In all thirty-nine injections were given. Combe, after a year's study, reported good results in pyloric strictures and in adhesions by bands, laryngeal stenosis, cardiac stenosis, cirrhosis and ascites, and in cerebral sclerosis. Planta cured an extensive scar from a burn with twenty-five injections on alternate days. The patient was a child of five years. Waelsch cured a plastic induration of the penis; Woltke, one of chronic synovitis; Boseek, one of myositis ossificans. Grunert found thiosinamin of use in eye-cases, lupoid scars, and postneuritic atrophy. The improvement was not maintained if the remedy was discontinued too soon. Bruno also made a favorable report of this agent in eye-cases. Brinitzer used it successfully in scleroderma; Salfeld in chronic polyarthritides and arthritis.

deformans. Kratzer employed it with benefit on a horse with fibrous tendinitis.

Lang succeeded in a case of urethral stricture of 53 years' standing. Castellani reported excellent results in the treatment of elephantiasis by the hypodermic injection of fibrolysin, combined with the use of rubber bandages in cases where the skin was verrucose. If the skin was smooth the rubber bandage was not advocated. In one case the patient, who had suffered for twelve years, received 62 injections, at the end of which the circumference of the ankle had been reduced from 23 1-2 inches to 9 inches, the calf from 25 1-2 inches to 12 inches.

How to Use Thiosinamin

Renan found a solution of thiosinamin, 1 part in 25 parts of sterilized distilled water or normal salt solution, practically painless when injected under the skin of the abdomen. The menstruum must be cold and prepared in a sterilized vessel. The solution is slightly opalescent. Each injection contains 20 centigrams of thiosinamin. Merck suggests a solution of 10-percent strength in 4 parts of freshly boiled and filtered distilled water, and 1 part of glycerin.

By the mouth the usual dose is 1-2 to 1 grain, three times daily, in tablet or capsules. Injections are given two or three times a week. Unna employs soaps, plasters and ointments of 5 to 20 percent. When administered by the mouth the result is not satisfactory.

Not much effect should be expected within three months of its steady administration. The writer failed to secure satisfactory results in one case of chronic synovitis of the knee.

The Conclusions of Tyrode

Tyrode's very elaborate experimental study of this drug led him to the following conclusions:

"Thiosinamin undoubtedly produces a profound effect upon the general metabolism when given in sufficient doses. Although the decrease in appetite and later the refusal of food are important factors in the weight, yet the latter is decreased before there is

much falling off in the appetite. Coincidentally the urea in the urine increases markedly as long as the kidneys are able to secrete. This coincident increase of urea and loss of weight would suggest an augmented katabolism of proteids. Likewise the very general fatty degeneration found after such a short time as six days suggests that the destructive action on the protoplasm of cells is very rapid. This fact, however, does not seem to be specific toward connective tissue, since the changes were observed chiefly in epithelial cells. If thiosinamin has the power of dissolving scar-tissue, we should rather expect some action on normal connective tissue, which has not been the case. However, a series of experiments, which will form the subject of another publication, is now being made with a view of studying the effects upon experimental scars.

"In view of the marked poisonous action upon animals and also of the reported cases of poisoning in man the writer would recommend that in practice thiosinamin be used only with great caution and in very small doses."

Can Heart Changes Be Cured?

A writer in *Die Therapie der Gegenwart* suggests that by the use of thiosinamin it may be possible to soften the cicatricial formations in the heart resulting from rheumatism. Three cases were treated by hypodermic injection. A good solution is: thiosinamin, 10 parts; glycerin, 20 parts; water, 70 parts. Warm slightly before using. Of this a hypodermic syringe-ful may be injected every third day. The results are said to have been quite encouraging, the patient being quickly relieved of insomnia and other troublesome symptoms.

Remete reports the result of his use of thiosinamin in 20 cases of urethral stricture. He used a 15-percent alcoholic solution, injecting 15 minims into the back twice a week. The injection was quite painful, cocaine being often required to deaden the pain. The results were favorable. It did not dilate the strictures, but the strictures became softer so that dilation was much easier.

Lengemann gave this drug for Dupuytren's contraction, which gives a clawlike appearance to the hands. He says the cures have endured for a year. Altogether 45 injections were made within eight weeks, by which time normal flexibility had been restored. He injects the solution where its effects are desired, preceding with cocaine, and following with massage, passive movements, and applying dressings saturated with thiosinamin solution.

McCullagh says that this drug exerts a marked beneficial action on ear disease with the formation of new connective tissue. The benefit is due to increased pliability of this tissue, allowing the usual forms of treatment to accomplish their object better. The administration should always be accompanied by mechanical measures. As good results may be obtained by administration by the mouth as hypodermically. Better and more prompt results may be obtained in recent

cases. It exerts a beneficial action on aural vertigo. Care should be used in looking for contraindications. Better results may be obtained with it in the relief of tinnitus aurium than with any drug used heretofore.

Summarizing, then, the results of observations as reported in medical literature, the effects of this agent may be stated to be:

Thiosinamin softens scar-tissue; dissolves pathological fibrous tissues; softens strictures and so permits the easy passage of sounds or foods; promotes absorption of cicatricial tissue. It has a wide field of usefulness in scars; fibrous adhesions; fibrous tumors; strictures; tympanic adhesions; corneal opacities; parametritis; locomotor ataxia; pyloric obstruction; Dupuytren's contraction; stenoses; ankyloses; lupus; glandular tumors; gastric adhesions; keratitis; keloid; sclerosis; elephantiasis; choroiditis; deafness due to sclerotic processes in the middle ear.

Treatment of Acute Lobar Pneumonia

How the Disease May Be Aborted or Cured

By JOHN M. SHALLER, M. D., Denver, Colorado

NOW that the winter with its storms and snow and sleet holds the land in its icy grip, and pneumonia is one of the dreaded diseases prevailing, it is natural for physicians to ask themselves whether they can, in any way, prevent the development of pneumonia, or otherwise at least lower its death-rate among those already attacked. There is, I can confidently assert, a plan that would greatly lessen the mortality-rate, but the education and cooperation of the people is a necessary part. The people must learn to recognize this disease in its incipency. If possible, they should even anticipate the stage of inflammation, and without delay send for some physician who believes that acute inflammatory diseases, at a certain period, may be aborted.

The facts necessary for the laity to understand are not difficult to grasp. The rigor

is the initial symptom and is present in about 80 percent of patients attacked with acute lobar pneumonia. In childhood the chill is the exception. The people should be taught that a chill, except in malarial districts, as a rule indicates either blood-poisoning or pneumonia. Either of these conditions is certainly serious enough for prompt medical attention, the chief reason for this promptness being that if taken at the beginning pneumonia may be aborted by appropriate treatment, and this means that the duration of the attack may be shortened. This leads directly to a more important matter, namely, that of preventing a fatal termination. Necessarily, if an inflammatory disease is aborted in its congestive period, it cannot advance to the exudative stage with its greater dangers.

However, in order that the people may take advantage of attempts to abort pneu-

monia, the physician himself should believe that congestion, which always precedes inflammation, may be checked; that the excessive quantity of blood in the threatened area may be diverted to other parts and away from the focus of threatened disease. Not only should he believe this, but he should be anxious to make the effort. The earlier in the congestive period that such treatment is begun, the more satisfactory will be the results. If we are influenced by the old teaching, that inflammatory diseases must run their course, and if we will not believe or act otherwise, it will be unfortunate for our patients.

What should be done, however, is to make the trial, provided treatment can be begun before solidification has set in. The probabilities are that the surprise that follows, because of the rapid improvement, will be so gratifying that no more urging will be necessary. One trial will usually prove convincing.

At the beginning of congestions (which are identical with so-called "colds") any remedy that can flush the capillaries of the skin with blood, such as hot baths, or that can produce copious sweating or copious watery stools, will often "break up" a congestion or "cold." Dover's powder, tartar emetic, veratrum viride, coaltar derivatives, and aconite, have all been successfully used by physicians for this purpose. Aconitine is the remedy preferred by the writer, as one that is extremely useful in checking acute inflammations, provided it is given not much later than twenty-four hours after the first symptoms show themselves.

Flush the Capillaries with Aconitine

As a rule, debility or cardiac depression is not a part of the congestive period. Aconitine may therefore be given without hesitation or fear of producing anything but good results. The probabilities are that the hesitancy to use aconitine has been handed down by former teachers who were not familiar with its use, and they very naturally condemned it. The fear is that it may weaken the heart, but a few trials in active congestion will show that aconitine slows the heart

action without weakening its stroke. The number of heart-beats is gradually reduced, and the beat of the pulse against the finger shows strength.

There should be no more hesitancy in using aconitine than is using any other medicine which belongs to the poison class. The physician's knowledge and skill should give him that confidence which enables him to use any potent drug without fear, even with infants. He should feel, and even know, that certain favorable results will follow. If not, then he certainly should not use any drug about which he has these doubts.

When a physician says he will not give aconitine "because it is a poison that can do harm," the least that may be said is, he certainly knows nothing of the action of this one medicine, and probably lacks confidence in his ability to use it. Aconitine can and does abort acute lobar pneumonia, as well as many other acute inflammatory diseases, if properly prescribed during the congestive period.

Congestion of Respiratory Circulation the Forerunner

All are fully aware that pneumonia begins with congestion of the capillaries in the walls of the air-cells, being ushered in by a chill, which should serve as a warning. This chill indicates congestion. It is the forerunner of inflammation. It is really a clue which should be followed up as soon as observed. As a rule there is no difficulty in breaking up or checking a congestion if correct treatment is applied early enough.

A congestion can be aborted because it is not an established condition. It is a stage of transition. A chill simply means that a congestion is forming, which, if left unchecked, must necessarily result in inflammation. The object of treatment is to abort this congestion and prevent the exudation of inflammatory lymph. If several days have passed since the initial chill, there should be no effort made to abort.

In the writer's opinion the best medicine with which to check or dissipate acute congestion is aconitine. This remedy should be given as soon after the chill as possible,

and given in frequently repeated doses, at short intervals, until the desired effect is produced.

How to Give the Aconitine

If the temperature should be as high as 105° or 106° F. in an adult, the case is serious at the very start. If the pulse is full, strong and bounding, the patient's face flushed, and the skin hot and dry, one granule of aconitine (I use Abbott's), gr. 1-134 should be given, in solution, every fifteen or twenty minutes until the skin becomes moist, the breath easier or the pulse reduced. At this time, the temperature begins to fall, and so does the pulse-rate. The probabilities are that they will continue to fall, all other conditions improving likewise. It often happens that within twenty-four hours after administering aconitine the inflammation is checked, that is, the temperature is normal and remains so.

There should be no hesitancy about giving aconitine thus frequently and in such small doses. Instructions should always be given that as soon as improvement manifests itself, the remedy should gradually be withdrawn, that is, it should be given every half hour or every hour. The improvements that show themselves are a general feeling of comfort, disappearance of restlessness, of shortness of breath, of hacking cough and pain. The tongue and the skin become moist and the secretions generally are restored to the normal.

In the treatment of children the same rule holds good: the higher the fever, the more active the symptoms, the more robust the patient, the harder should aconitine be pushed, until improvement becomes manifest or physiological results are produced.

In children the matter of dose requires some attention. The rule is: For each year of the patient's age dissolve one granule of the aconitine in 24 teaspoonfuls of water, together with one extra granule. For instance: If the child is 2 years old, 3 granules are dissolved in 24 teaspoonfuls of water, and one teaspoonful of this solution is given every fifteen minutes, every half

hour, or every hour, according to the severity of the attack. For an infant under one year, 1 granule in 24 teaspoonfuls of water is the proper proportion.

There should be no more hesitancy in giving children aconitine in doses such as above indicated than in giving it to adults, the object always being to push the remedy until the improvement shows in some way, or until physiological effects are produced, then gradually reducing the dose.

Of course aconitine should never be given when the pulse is feeble, the extremities are cold, the skin is cold and moist, or when the lungs are full of sibilant râles.

Important Considerations

It is a very good plan always to begin treatment with a saline laxative.

An important point for the physician to remember is to have implicit faith and confidence in his ability to cure, and in the efficiency of medicine to produce the desired effects. He should believe this firmly, and the patient should also be made to believe that a cure will certainly be effected. The physician may think that he cannot positively know this, but he must take into consideration that results are not entirely produced by the medicine alone. Much depends upon the physician himself, the manner in which he impresses upon his patient's mind the great hope and the chances in his favor for complete recovery.

The physician who will take charge of a serious case and depend entirely upon the medicines to effect a cure, without taking into consideration the immense and wonderful power of his own mind in controlling conditions, is neglecting a potent means at his command for good.

In pneumonia, as well as in all other conditions, the mind of the patient must receive positive suggestion of relief and cure. If the patient can absorb this hope from the doctor and have full confidence in him and in all that he is doing, the patient is already half cured. One important point is, the attendant physician should make positive efforts, without show, to gain the patient's confidence. It is absolutely necessary for

the physician to have hope himself and to instil that hope into his patients.

Do Not Tell a Patient His Case Is Hopeless

Under no circumstances (except in rarest cases) should a physician ever tell a pneumonic patient that his case is hopeless. It is better even not to tell members of the family, because they very often carry this to the patient, and put it in such a way that it must act detrimentally. Physicians must understand that the mental state of the friends of the patient, greatly influences that patient. We are beginning to realize that it is not always necessary for a thought to be expressed in words in order to be effective. A thought without being expressed, even by act, may have power to do damage.

We are employed because the people have confidence in us, and our judgment should stand for a great deal. If we think that the patient must not be told of the seriousness of his condition, the family must abide by that decision. By telling a sick person that he is going to die, we certainly are taking away from him the most potent means he can use for himself. The will has an immense power over the body both in health and disease. We should not weaken or destroy this power and take away the main prop from the patient. We should not hesitate a moment to make any statement to a patient that might help him to recover.

Our business is to cure. The means employed to cure are not of much moment when we take into consideration that we may save lives thereby. So let us encourage them all we can. Give them all possible hope with every dose of medicine we give, and, by putting suggestions strong enough, if we can make them feel their case is not

hopeless, we are bound to have better results than we possibly can without them.

One chief thing is to have faith in ourselves and in the medicine or means we use. Medicines are active and useful and can and will cure when rightly employed. By "rightly employed" is meant, particularly, the strong mental impressions that are made by the physician himself as to what medicines will do. This means confidence in the physician. He must know that patients have this confidence. This is one of his best assets if he will employ it for the purpose of producing cures. Nowhere else, so much as in pneumonia, are the beneficial effects of medicine seen, when backed by hope.

We have considered but one feature of acute lobar pneumonia, and that is, its abortion during its congestive period, but this is undoubtedly the most important matter connected with the treatment of this or any other acute inflammatory disease.

One word in regard to so-called stimulation. Alcoholics do flush the capillaries of the skin by paralyzing the vasomotor nerves and are therefore of more value when the skin is cold and clammy than when it is hot and dry. The so-called cerebral excitement produced by large doses of alcohol is not the result of arterial stimulation, but is delirium, similar to that which follows the administration of other narcotic poisons. If it is understood that alcoholics are narcotics, similar to opium in effects, it is intelligently administered. But the probabilities are that its narcotic effect is not always considered. Alcohol will soon be generally recognized as having narcotic properties similar to opium, and that each can be used interchangeably as stimulant or narcotic in place of the other.

HAPPINESS, at least, is not solitary; it has joys to communicate; it loves others, for it depends on them for its existence; it sanctions and encourages all delights that are not unkind in themselves. The very name and appearance of a happy man breathe of good nature, and help the rest of us to live.—Robert Louis Stevenson.

Uncomplicated Bronchitis, and How to Treat It

By J. W. YANKEY, M. D., Sylvia, Kansas

BRONCHITIS is an inflammation confined almost entirely to the mucous membrane of the bronchial tubes. In its chronic form it results in cough and a thick mucopurulent expectoration. There may be fever and the general health may or may not be impaired.

Bronchitis occurs practically everywhere and apparently its frequency corresponds with the degree of humidity in the atmosphere. Sudden changes of temperature and cold winds are additional causes. On account of greater exposure males are more frequently affected than females. Simple bronchitis is frequently not of bacterial origin, depending simply upon a hyperemia of the bronchial mucosa, following upon a contraction of the superficial blood-vessels of the skin.

Bronchitis may occur by extension of laryngeal inflammation. It is a frequent accompaniment of infectious diseases and may be due to the inhalation of gases, vapors or dust.

The effect of bronchitis upon the health of the patient depends largely upon his general condition. The robust may not be perceptibly affected, while the debilitated, and especially persons at the extremes of life, may be overcome.

I The Symptoms of Bronchitis

As to the subjective symptoms of uncomplicated bronchitis, a chill may or may not occur. According to Bartholow, in severe cases there occurs a succession of chills or chilly sensations felt several times during the day, which have, however, no influence on the temperature. There is generally a sensation of soreness or rawness under the sternum. A short, dry cough, aggravated by change of position, occurs early. The temperature may range from normal to 103° F.

The expectoration, consisting at first of white and frothy viscid mucus, eventually becomes mucopurulent, and continues after the fever, if present, has subsided. The pulse usually keeps pace with the temperature.

Among the objective symptoms we have a respiratory murmur-rather rough and harsh, also sibilant and sonorous râles. Percussion, palpation, inspection, give only negative information.

The prognosis of acute uncomplicated bronchitis is good, except at the extremes of life. Some very young and some very old patients succumb to the disease, but they are very few.

Chronic bronchitis is a disease of long duration, persisting sometimes thirty and forty years. It rarely kills but often paves the way for tuberculosis which winds up the scene.

Treatment of Bronchitis

In the treatment of bronchitis, much that is laid down in textbooks, perhaps even more that is said in the journals, and nearly all that is found in the literature recommending the various proprietary remedies could well be forgotten so far as the reputation of the physician and the welfare of the patient are concerned.

Although I am not a nihilist on the subject of drugs, I do believe that the most that can be said for many of them is that they probably do no harm.

One of our most noted therapeutists would have us use, in the early stages, syrup of ipecac and solution of potassium citrate, 1-2 dram of the former and 2 drams of the latter, given every three or four hours. For the cough, when annoying, 2 or 3 grains of Dover's powder every two to four hours as may be needed. For counterirritation, a mustard draft over the front and back of the

chest, left on only a short time, can be used effectively. More agreeable, and perhaps even more effective for those who have no idiosyncrasy against it, is the preparation known as capsolin. The various mud preparations may be used—sometimes effectively. If the patient is having too much company, use instead of a counterirritant oil of amber in olive oil, in the proportion of 1 to 7, or stronger, according to age; only the faithful will remain—the odor will drive most of them away.

Bronchitis tents are recommended; they are probably overdone by some and by others not even tried. Medicated steam doubtless is of benefit when used with proper discretion. Menthol compound, tincture of benzoin, oil of eucalyptus and oil of pine are some of the drugs used in medicating steam.

Remedies for Special Indications

After secretion is established, ammonium chloride, in doses of 5 to 10 grains, is said by some authorities to be a most effective stimulant but usually needs something to take care of it. For this purpose fluid extract of licorice, spirit of lemon and water are useful. For cough at this stage, codeine 1-4 grain or paregoric (which however I should not use at this or any other stage of the game) is recommended. When the ammonium chloride is too nauseating or is not effective, in many cases oil of santal, in 3- to 10-minim doses (in capsule) in my hands has been effective and has been well tolerated. Oil of eucalyptus may be similarly used with good effect. Elixir of terpin hydrate with heroin (1-12 grain) may be used as a stimulant cough remedy.

Treating Acute Bronchitis

The treatment of acute bronchitis resolves itself into three parts: restoration of the equilibrium of the circulation, elimination, and support of the patient. For the first, atropine or hyoscyamine, and counterirritants if necessary. For the second, calomel and saline laxatives, also a solvent, such as calx iodata, and emetine if needed. For the third, triple arsenates with nuclein or some other good tonic when needed. The

cough may need temporary treatment, but control the disease and the cough is already controlled.

The National Standard Dispensatory recommends only 88 different drugs as being useful in the treatment of bronchitis, from which an almost endless number of combinations can be made. Who might not be lost in such a boiling sea of drugs and their combinations? Who might not overdo? Who might not save? From this multiplicity we are expected to select. Who would think of adding more? Who would not eliminate, say, at least three-fourths of the great number? That is just what is being done by the late writers on materia medica. A very large percentage of the drugs once employed and believed to be as potent as were the six coveted hairs from the dog's tail that the negro woman wanted to cure her boy of the "phobia" are now considered useless and consequently are left out altogether. Some of them are still sold on account of the habit some have of using them because others have used them.

[We have but little to add to the excellent treatment outlined by Dr. Yankey for an ordinary attack of bronchitis; but we would suggest that, especially in cases with an acute onset, aconitine with or without strychnine arsenate, or the dosimetric trinity given together with the calomel and a saline laxative, would often succeed in cutting short the attack.

In making the diagnosis we want to be very sure that we actually have a simple and uncomplicated bronchitis to treat. It is of particular importance to exclude tuberculosis, which in its destructive form (phthisis) often at first passes under the guise of bronchitis.

The specific diagnostic methods which have come into use during the last few years have now been sufficiently well established to be employed with confidence by the general practitioner; still, one unaccustomed to the biological characteristics of tuberculosis may do well to consult a specialist, at least until he has acquired sufficient information and experience.—E.D.]

Chronic Rhinitis

Its Nature, its Causes and How Relieved

By **W. E. McKinley, M. D., St. Joseph, Missouri**

Assistant Physician, State Hospital for the Insane

CHRONIC rhinitis is defined by McKenzie as a "chronic inflammation of the lining membrane of the nasal fossæ. characterized by swelling of the mucous membrane, increase in the natural secretions, obstruction to the nasal passages, nasal voice, impairment or loss of smell, and hypertrophy of the turbinated bodies."

The Pathology of Chronic Rhinitis

In all cases of chronic inflammation of the mucous, or lymph, tissues, the recuperative power of the part diminishes in proportion to the severity and number of recurrent attacks of inflammation. The disease may occur without any apparent primary cause, having all the characteristic symptoms of chronic catarrh from its incipency. A strumous diathesis is frequently found in the most obstinate cases; but sometimes we find this disease very intractable, even when there is no evidence of constitutional taint. It is common at all periods of life, but is most prevalent in childhood.

There are many predisposing and exciting causes, such as improper and inadequate clothing, adenoids, congenital or acquired deformity of the nasal passages, chewing and smoking tobacco (the atmosphere soon acquires an irritating character when contaminated with tobacco smoke). A damp habitation is a frequent cause of chronic catarrh. Stimulants also are exciting causes and are injurious in proportion to the amount of alcohol they contain. Atmosphere loaded with irritating dust, also the inhalation of irritating vapors, as of phosphorus, arsenic, etc., frequently produce chronic catarrh, followed by many of its accompanying evils.

Formerly this affection was considered hereditary, from the fact that it is most common in childhood. This theory has long since been discarded excepting by a few who still cling to their cherished idea of

former days. I do not believe that it is ever inherited. The child may inherit a weak mucous membrane which may predispose it to diseases of that membrane. It has been said by some writers that the lighter the skin, the more likely the disease and the more difficult to treat successfully.

The Symptoms of the Disease

An increased flow of mucus is the most common symptom of catarrh. The symptoms come on insidiously and the patient may not become aware of having catarrh until he is seized with frequent paroxysms of sneezing and the nasal obstruction is well marked. The obstruction to nasal respiration and the extra secretion may be gradually on the increase, altering the character and quality of the voice. The mucus dripping down into the nasopharynx creates a desire to clear the throat and nasal passages, provoking hawking and sniffing, which grows more pronounced from day to day, especially during cold, stormy weather. The difficulty experienced in breathing arising from stenosis of the nasal passages soon becomes permanent, and the patient is obliged to breathe through the mouth, which in itself produces dryness of the throat, and causes the secretion to cling more tenaciously to the mucous membrane and to be dislodged with difficulty. This disease usually extends to the nasopharynx and may invade the eustachian tubes, giving rise to catarrh of the middle ear, serious deafness being the result. Obstruction to the lacrimal canal have been noticed in not a few cases of nasal catarrh of rather severe type.

Rumbold says: "During a course of eighteen years' practice he had had many patients, amounting to several hundred, whose mental conditions have been more or less affected by this inflammation extending from the nasal passages to the membranes

of the brain. Uncontrollable melancholy and inability to think consecutively are some of the distressing symptoms exhibited by his patients. Others forget even their own names, while one unfortunate gentleman (whose nose was no doubt in an exceptionally morbid state) experienced the sensation, while walking, that he was sinking into the pavement up to his knees." (McKenzie.)

Nasal Stenosis in Infants

Nasal stenosis, due to hypertrophy of the turbinated bodies (which is such a common symptom of catarrh), may prove of serious consequence in infants, as the obstructed nasal respiration renders the act of nursing almost impossible. The child's continuous efforts to get more air into the lungs and to overcome the nasal obstruction is an important factor in producing round shoulders and flattened chest, or pigeon-breast.

Mouth-breathing (which may be observed in nearly all these cases) is injurious to the lungs, as the supply of imperfectly prepared air engenders passive congestion of the mucous membrane lining the air-tubes (Pyncheon), and interferes with proper oxygenation of the blood, leaving the system open to invasion of various morbid germs. The system may also be greatly depressed by autointoxication induced by overproduction of carbon dioxide, due to nasal stenosis.

As this disease approaches the more chronic stage, the mucous membrane becomes darker, and the blood-vessels more tortuous, the hypertrophied turbinates take on hyperplasia, while at the same time the secretions are perceptibly increased and found covering the inferior turbinated processes, nasopharyngeal cavity and upper portion of the fauces.

The secretions at this stage vary in color and consistency from a greenish yellow to white. The increased heat in the parts causes an evaporation of the watery constituents of the secretion which, consequently, forms into crusts, this when decomposing giving the peculiar offensive breath so frequently observed in those suffering from chronic catarrh.

In old chronic cases of catarrh it will be observed that the mucous membrane is much darker than in the acute stage, while the membrane in tobacco chewers will be found purple in color, and the whole membrane congested and covered with secretion. In those patients of between thirty and forty years of age thus affected we find the completion of the hypertrophic stage and the commencement of the atrophic.

Symptoms of the Atrophic Stage

In the young there is inspissation of the secretion and impeded respiration, while in the old very little if any crusting and seldom any impediment to respiration occurs, owing to partial atrophy. The more chronic the inflammation and the greater the anesthesia the more tenaciously will the secretion adhere to the membrane.

Deafness or some aural complication frequently follow as a result of this disease, especially where there is much nasal obstruction. Thickened secretions may block up the orifice of the eustachian tubes, preventing a sufficient quantity of air from entering the middle ear, and the intratympanic air is gradually absorbed by the blood which circulates through the vessels in the walls of the cavity.

In this manner a passive congestion of the mucous membrane of the middle ear is produced, a condition which constitutes practically the first stage of an inflammation, and if long continued, results in permanent tissue changes. Any condition which for a considerable period affects the circulation within the middle ear will also cause a disturbance of the labyrinthine circulation, from an alteration in the tension of the fluid contained. (Dennis.)

In the atrophic stage we may expect to find all the symptoms indicative of that condition: great dryness of the mucous membranes, giving them the appearance as if they had a coat of varnish, with the complete atrophy of the tonsils and the turbinated bodies. The blood-vessels are larger and more tortuous than in victims of younger age. The mental symptoms are more important. In the chronic stage of those past

forty, headache, face-ache, brow-ache often are common symptoms, while asthma and bronchitis are frequent sequelæ.

The Prognosis of Chronic Rhinitis

The prognosis is favorable when proper treatment is instituted. A few years ago the majority of the profession considered this disease unfavorable or doubtful, but much of this opinion was based upon poor instrumentation and faulty methods of treatment in vogue at that time. If left to itself, this disease either remains about the same or gives rise to hypertrophic changes of the mucous membrane with all of its accompanying evil results, such as polypi, middle-ear diseases, enlarged tonsils, asthma, bronchitis, chronic pharyngitis or laryngitis.

Recurrent attacks or acute exacerbations of this disease are very common, especially in those past forty years of age. In those of twenty-five years of age or younger a favorable prognosis may be given in almost every case, and a return of function of the mucous membrane may be anticipated.

In those past that age the prognosis is not favorable, yet with the proper treatment the mucous membrane may be so nearly restored to its normal condition that a few treatments every spring and fall will practically render the patient free from any annoyance from this disease.

As treatment progresses favorably, we may expect a change in the secretions as to color, condition, consistency and quantity; also a gradual reduction in the size of the blood-vessels, and a change in the color of the mucous membrane from a dark and dusky red color to bright-pinkish hue.

How the Disease May Be Treated

Treatment should consist both of local and constitutional measures. The patient should always be diligent in following out the instructions of his physician with regard to hygiene and other sanitary measures. All local treatment should be applied warm; even the old familiar Dobell's solution should be warmed before thrown upon the sensitive schneiderian membrane. Aqueous solutions are so quickly evaporated that they give

but little benefit, therefore the principal medicaments should be applied in an oily state. Antiseptics, such as oil of eucalyptus, cinnamon, terebene or gaultheria, will be found useful in many cases. If there is fetor arising from decomposition of the secretions, resorcin, guaiacol or thymol are more valuable agents to use.

In the atrophic stages, where dryness of the mucous membrane is present, the more stimulating remedies, such as eucalyptol, combined with liquid petrolatum, are indicated.

During acute exacerbations sedative sprays should be used until congestion is reduced to a minimum, then the hypertrophied tissue should be removed, so as to permit a sufficient volume of air to pass freely through the nasal cavity. The redundant tissue may be removed by excision or by cautery. The method I most prefer is by galvanocautery, although I sometimes use glacial acetic or chromic acid when my battery is not in working order. It is best, however, to leave as little cicatricial tissue as possible as it cannot take the place of healthy mucous membrane; but it is better to leave scar-tissue than to leave a large obstructing turbinate which interferes with nasal respiration and proper drainage. It should also be remembered that too much burning is as bad as not enough, and the physician should be guarded that he does not overdo a "good thing."

For office use and home treatment of this disease I order as a cleaning agent the following, which is a concentrated stock solution. I have my druggist make it for me from my formula, which I have styled "solution Dobell improved." This solution is similar in many respects to the Dobell-Pyncheon. This is my formula:

Sodium bicarbonate, ozs. 2; sodium baborate, ozs. 2; menthol, drs. 4; glycothymoline, ozs. 8; glycerin, ozs. 24.

Adding of this 1 ounce to the pint, makes about the usual strength of Dobell's solution.

The patient should be seen twice or three times a week.

As a constitutional treatment, the syrup of hydriodic acid, codliver oil and malt prep-

arations, iron, quinine and strychnine, etc., should be prescribed. I have frequently found the vegetable alteratives and tonics to give quite good results in not a few cases. It is also quite important that those who are delicate, thin in flesh and predisposed to colds should wear sufficient clothing to protect the surface of the body and keep it warm. The feet should always be kept warm and free from perspiration. No class of patients requires stricter attention to the laws of health than those who have a pre-

disposition to nose and throat trouble. Sleeping in crowded or overheated rooms is a dangerous practice. The sleeping rooms should be warm but well ventilated. Young children and adults with thin hair should wear nightcaps during the winter when retiring for the night.

The physician who pays the most attention to the small details in regard to having his patients follow out the proper observance of the laws of hygiene will be most successful with this class of practice.

Hernia Complicating Pregnancy

An Unusual Case, which was Cured by Operation

By **MAX THOREK, M. D., Chicago, Illinois**

President and Surgeon in Charge of the American Hospital; Ex-Associate, Diseases of Women, United Hebrew Charities

THE case reported below is instructive as well as interesting from a number of standpoints. It shows the benignancy of the presence of enormous-sized herniæ in some cases of pregnancy, as well as the brilliant results one may obtain, even in neglected cases and those of long standing, when subjected to proper operative care.

History of the Case

Mrs. Y. K., born in Russia, 41 years old. Has had nine children. No menstrual disorder, and has never been ill. At the age of 21 she observed, after a severe strain due to lifting a heavy trunk, that a slight bulging was noticeable in her right groin, which swelling was tender to manipulation for a few days.

She did not pay any special attention to the condition, consulting no one. The condition gradually became worse with reference to the size of the swelling in the inguinal region, but subjectively she was free from suffering until two years ago. At this time she felt pain and increase in size in the protrusion even on slight exertion. She went through her pregnancies and deliveries without much discomfort. Being

anxious about her peculiar condition she applied to me for professional help and advice.

The Physical Condition

The patient is a middle-aged and well-built woman. She is found to be pregnant about eight and one-half months. The panniculus adiposus is well developed. In the right inguinal region a tumor is visible having the following dimensions: transverse measurement, 14 cm., longitudinally the tape registers 17½ cm. It is broader at the base and somewhat constricted at the upper pole, which latter occupies two-thirds of the mons veneris. The surface of the mass is smooth and of a globular form. The consistency is semifluctuating and the contents are easily diagnosed as intestinal.

Efforts at taxis in the recumbent posture are only partially successful. There is a marked impulse on coughing, and straining efforts visibly increase the size of the tumor. The position of the gravid uterus is found to be normal. The pelvis is of normal dimensions and the position of the child R. O. A. Numerous varicosities are observed on the lower limbs and about the genitoanal regions. The characteristic gurgling, indicative of enterocele, is found.

The size and tension of the hernia disappear when efforts at straining cease. Percussion of the sac elicits tympany.

The accouchement was uneventful, the only obstacle being the hernia, not because of any interference with the functions of the uterovaginal tract but as a mechanical impediment on account of its size and hanging in front of the parts contiguous, obscuring them from view. This state of affairs was, however, easily obviated by gloving the hands of the husband (there being no nurse in attendance) and instructing him to hold the hernia out of the way, toward the symphysis pubis. The puerperium terminated uneventfully.

The photograph shown here was taken three months after the delivery of the child and shows the condition prior to operation.

Operation was advised and accepted.

The Operation on the Hernia

The patient was thoroughly prepared, shaved, etherized and placed on the operating table, with knees flexed, and an effort at taxis made with only partial success because of adhesions between the omentum and intestinal adhesions to the sac wall.

An incision, elliptical in form, was made over the mass and a few careful strokes of the knife were rewarded by the appearance of the characteristic straw-colored fluid, indicating entrance into the peritoneal cavity. A mass of matted omentum presented itself, which was promptly dealt with by chain ligation and exsection. There was no constriction at the neck of the hernia, it being nearly as wide as the fundus. On account of the enormous size, as well as the length of time the hernia had existed, the coverings were fused into an unrecognizable thick layer of chronically inflamed tissue. Its structure was opaque and numerous enlarged and tortuous vessels were seen coursing through it. The canal of Nuck was converted into one huge opening in which no relation between the external and internal abdominal rings could be made out. The round ligament was adherent to the sac; it was exsected with the sac.

The epiplocele, as stated, was excised and the remaining enterocele, consisting of a

number of feet of small intestine and part of the cecum, was examined and returned to the abdominal cavity. The repair of the inguinal canal presented obstacles on account of the anatomic disarrangement consequent to the condition, but was overcome by the usual technical steps employed in the Halsted-Bassini procedures. The patient



The Hernia After Delivery

made an uneventful recovery. The examination of the patient three years after the operation shows no tendency to recurrence and she enjoys excellent health.

Conclusions

Large herniæ are more amenable to operative treatment and offer a better prognosis as to the permanency of cure in woman than in man, one of the reasons being that greater room is afforded for the reception of the enterocele in the more capacious female pelvis. Pregnancy is to be looked upon as a favorable condition instead of a

complication, because the gradual increase in size of the capacity of the abdomen due to the action of the gravid uterus on the abdominal parietes, while their resultant laxity affords space for the reception of the

reduced hernia, which could not be accommodated in the smaller abdomen of male subjects, without resorting in extreme cases to more formidable surgical measures, such as resection of bowel, etc.

The Race Problem in America in its Relation to Criminal Sociology*

By G. FRANK LYDSTON, M. D., Chicago, Illinois

Professor of Genito-Urinary Surgery, Medical Department of the University of Illinois

EDITORIAL NOTE.—Recent statements made by Dr. Lydston concerning the negro race and the problems which are centered in it have been made the subject of perverted and inaccurate quotation by the newspaper and medical press. One journal heads a column with the line, "Lydston Would Have Whites and Negroes Marry," and it is represented that he favors miscegenation of whites and blacks. This Dr. Lydston brands as absolutely false. The truth is exactly the opposite, as any person familiar with his published writings can testify. Instead of favoring the mixing of races he has pointed out the danger which it entails and the imperative necessity of recognizing the existence of this problem and seeking a solution. This is the problem which he discusses here.

II

THE attitude of this country toward the negro is supremely ridiculous, however the race problem may be regarded. He occupies a plane of theoretic equality of citizenship, yet everybody knows there is no equality. Booker T. Washington, a man whose attributes make him worthy of association with even the most intellectual among white men; dines with President Roosevelt, and the latter is immediately put upon the rack of obloquy and criticism by the entire South, and, to a certain extent, by the North. In Europe—indeed, as I have already said, in every country save the United States—there is no definite color line. In the northern states the color line is definite enough, while in the South it is practically a "dead line." The social, political, moral, legal, and intellectual anomalies involved in the American attitude toward the negro are past understanding. Whether expedient or not, they are still anomalies, and show that we are evading serious issues.

It might be a selfish attitude, but one would almost be justified in feeling grateful for the fact that the culmination of the terrible

race problem must be faced by another generation than ours—"after us the deluge." That it must sooner or later be faced is inevitable, unless greater intelligence is soon brought to bear upon its solution than has thus far been exhibited, and a radical change in the social, educational, political and moral management of the negro be instituted. If the black and white streams are to continue as theoretic organic blood-entities, flowing side by side in the same social system, the sooner the impossibility of any sort of equality between the races is understood, the better. If the races are not to blend—and heaven help us if they do—the white race must and will dominate, though the heavens fall.

Is There Likelihood of Social Equality

The fear of social equality of white and black is a bogey-man. The negro does not want it, nor could it be given him as a race if we would. He could not get social equality any more than a hod-carrier could break into New York's "Four Hundred." The same principle governs in each case. Social coteries and individuals alike will always draw their own social lines, irrespective of

race, occupation, or color. It is noteworthy, however, that the United States, the only country which stamps the negro as "free and equal," is the only country in which the color line is a dead line.

What does it all mean? It means that national white race intuition is blindly trying to protect the nation against the consequences of its own folly. Let political quacks and sentimental sociologists theorize as they may, the curse that the importation of the blacks inflicted upon America will accumulatively pass on to generations yet unborn. Our country has not yet settled its account with slavery. It has an account yet to adjust that shall make the enormous cost of the Civil War in blood, money and tears seem a trifling thing. If it is not adjusted in any other way it will be by amalgamation, for slowly but surely this country is becoming negroid.

Manual Education vs. "Higher" Education

If given a fair chance, manual training and industrial schools are destined to accomplish wonders in the moral training of the negro. Habits of industry and thrift, associated with the physique that proper physical exercise develops, will do more for his morals than any amount of preaching. The so-called higher education I believe to be a failure even with the lower class of whites. If this be correct, how much can be expected of it in the training of the majority of blacks?

This much is certain, if the negro is to be improved the work should be begun at the bottom. As a race, he may never become adapted to the higher educational ideal, but if he does, it must be by a gradual evolution, and not by a single mighty bound. Individual examples of high mental attainments exist, it is true, but they simply serve to show the possibilities of the race, and do not controvert the position I have taken. They do not prove a high average of intellectual capacity among the blacks, any more than Lord Bacon proved that any Englishman could be a Lord Bacon. A race that can produce a Booker T. Washington, a Du Bois, or a Paul Lawrence Dunbar has possibilities, but it will be many, many years

before such men can be taken as criteria of the intellectuality of the negro. The occurrence of such men is almost incomprehensible. Is their strain of white blood responsible? The great men of the white race have centuries of civilization behind them; they are the focal point of ages of intellectual culture. Behind the great black man stands an entire tribe of West Coast Africans.

With the rise of average intelligence of the negro will come ambition. He will learn both good and bad political ambition from the whites. If we do not take away from him the rights granted by the Constitution, by repealing such part of it as favors his race, he will one day be strong enough to demand that those rights be made real, not visionary paper-rights. If we do legally take away his constitutional rights, his intelligence, ambition, and consciousness of power will one day inspire him to demand that they be restored and carried out in practice.

Negro Leaders of the Future

Will the negro lack leaders? Not unless Toussaint L'Overture, Alexandre Dumas, Frederick Douglass, Booker T. Washington, and E. B. Du Bois were sporadic freaks of nature, biologic sports, comets in the sky of organic development, the like of which will never again be born in the history of the race.

Booker T. Washington advises the negro to put away political ambition, "at least for the present," and devote his energies to self-improvement, moral training, education, and the acquirement of wealth and property. Astute politician, Mr. Washington! With the acquirement of the things he demands, and their satellite, ambition, all that is necessary is leaders and numbers to swell the tide, and nothing short of a war of extermination can stop the negro from obtaining the rights of man as the American citizen understands them, in theory if not in application.

Professor Du Bois takes issue with Mr. Washington. Clever though he is, he has not the latter's far-seeing vision. To learn to labor and to wait is the sure road to polit-

ical rights. Industrial schools are the kindergartens in which the primitive brain of the negro will begin its development. Training the hand involves stimulus of brain-growth.

The race problem in its specific bearing upon sexual crime in America is most important, especially in the southern states.

Whatever the merits of the "war of races" may be, it is certain that the South is accused by frequent outrages of its women by negroes, followed by swift and terrible retribution. That sexual immorality and the perpetration of sexual crimes is not altogether one-sided nor monopolized by the blacks is also true, as will be seen later; but this does not lessen the specific importance of the sexual phase of negro criminality.

Although the majority of outrages perpetrated by negroes are committed in the South, because of certain conditions as regards the number of blacks and their peculiar environment in that section, similar crimes are claimed to be more frequently committed in the North by blacks than by whites, the numerical relations of the two races being considered.

In the study of the causes of the relatively frequent perpetration of rape by the American negro, numerous factors in the causation of crime in general should be considered. Only the special factors leading to sexual crimes concern us here.

Hereditary influences descending from the negro's barbaric ancestors are of prime importance. Considering the peculiar sexual customs of his ancestry, it is not surprising that antisocial traits—from our point of view—crop out frequently. Marriage among certain negro tribes is a close simulation of what civilized communities classify as rape. When the savage black knocks down his prospective bride with a club and drags her off to his kraal, he illustrates the prototype of the criminal sexual acts of the negro—and also of degenerate whites—in the United States or elsewhere. From the native African standpoint, however, there is nothing immoral or criminal in the negro marriage by capture—indeed, he draws a hard-and-fast line between it and what he

calls rape—nor is it restricted to him alone. Other primitive communities practising essentially the same custom.

The same method applied to the conquest of the female by degenerate whites or blacks in highly civilized communities is an infraction of law and morals, but it is not objected to by the occasional, or more than occasional, atavistic female. Among degenerate or reversionary types of whites sexual crimes are often a socially atavistic manifestation of savagery similar to that which occurs in the black rapist.

Influence of Heredity and Environment

Many centuries of civilization and appreciation of altruistic social obligations, i. e. expediency, have done much for the sexual subjugation of the white race, which is essentially a mixed type after all. We should consider, on the other hand, how short a time such influences have been brought to bear upon the American negro. We should also consider the fact that, from the standpoint of civilization and moral independence, his evolution really began with his liberation. Then, and then only, did he become a distinct social factor in this country. This by way of explanation, not of apology.

A disproportionate development of animal propensities incidental to a relatively low degree of differentiation of type is a marked characteristic of the negro. This, necessarily, is involved in the factor of heredity. It is a racial characteristic which, for physical reasons, environment will never entirely eliminate, although time will do much.

A relative defective development of what may be termed the centers of psychologic inhibition is characteristic of all races, white or black, of a low grade of intellectual development. This, with some races, might be corrected, but it certainly has not yet been corrected, nor is it probable that it ever can be completely in the negro as a distinct racial type. This is one of his racial handicaps.

Physical and moral degeneracy—the latter involving chiefly the higher and more recently acquired attributes—with a distinct tendency to reversion of type, is evident in the

southern negro. This physical and moral degeneracy and atavism is especially manifest in the direction of sexual proclivities. This is natural, accords with the principles of evolution, and applies to all races, but with especial force, perhaps, to the negro.

The cannibalistic sexual rites of Hayti and Liberia and the enormous increase of voodoo phallic worship among the southern negroes since the war are equally significant of atavism. When sexuality finds vent in phallic worship it is comparatively harmless as regards the individual. When it cannot be vented in this manner, it is likely to result in sexual crime.

Sex Morality Before and Since the War

The removal by his liberation of certain inhibitions placed upon the negro by slavery itself, which is so important in the causation of crime in general, has been especially effective as a causal factor of sexual crimes of the blacks of the South. The demoralizing influence of certain whites in the South, who did not recognize even sexual rights in their human chattels, was to a certain degree offset by fear on the part of the slave, yet it is remarkable that outrages upon white women were so rare. When the negro exhibited immorality in relation to the females of his own race he usually had the excuse of the bad example set him by the whites—often by his masters—who did not concede to the negress the attribute of virtue. Indeed, the negro, as a breeder, rather than as a moral factor, was often the slave-owner's chief concern.

The old idea that the negress had no sexual rights has lost ground since slavery days, but the view that she necessarily has no virtue—that virtue is an attribute impossible to the race—still exists. While not a subject for discussion in circles polite, cohabitation with negresses would appear to be in some quarters tacitly understood to be inseparable from the wild-oat sowing of youth. Moral instruction would seem to be needed nearer home than by the negro. Do not the mixed breeds prove my point?

Much of the racial trouble in the South today is due to the intrinsically immoral

attitude of some whites toward the negro. That a powerful undercurrent of resentment should exist in the minds of the blacks is but natural. That the whites have not always set them a good example is self evident. The prevalence of venereal diseases among the negroes and the whites who consort with them, and the large number of illegitimate mulattoes in America bears witness to this. How illegitimate relations of whites and blacks can be condoned or even tolerated, while miscegenation is legislated against, is perplexing to the logical mind. Be it remarked in passing that venereal disease is one of the curses which civilization brings to primitive folk. The South-Sea Islanders told me, when I asked about the prevalence of venereal diseases, that, "White man bring um; we catch um."

We are perforce compelled to admit that synchronously with the passing of the old-time slave—who still revered "ole marse and mistis"—and the incoming of his degenerate descendants, all kinds of criminality in the southern negro increased. Considering his disproportionate sexual development, is it remarkable that, with the removal of his inhibitions, sexual crimes—which were hitherto almost unknown—should result? The idea of equality with the whites—who were no longer to be revered as demigods—seething in the ignorant minds of the younger generation of blacks played a powerful role in determining the sexual direction of their antisocial acts.

The Negro Does Not Understand

An incapacity of appreciation of the dire results to himself of sexual crimes is evident in the lower-class black. This incapacity is characteristic of a low type of organization, and such little sense of personal responsibility as a large proportion of the race naturally possesses is readily inhibited by excitement of the lower brain centers by anger, alcohol, or the *furor sexualis*. The higher faculties of the brain—those of ideation and reason—are better developed in higher types of humanity, and there is usually a corresponding lack of development of the lower, or more strictly animal, centers.

When, therefore, in the superior race a struggle for the mastery arises between the intellectual faculties and animal impulses, the balance is likely to be with the former, particularly when a keen sense of personal responsibility comes into play; the reverse obtains in the black.

When all inhibitions have been removed by sexual excitement, there is little difference, so far as the sense of personal responsibility is concerned, between the sexual furor of the degenerate human being and that which prevails among the lower animals, in certain instances and at certain periods. This is not confined to the blacks, but is observed, although much less frequently, in some sexual criminals among the whites. This reversion of type is both physical and psychic, and must be taken into serious consideration, as it bears directly upon the question whether or not it is practicable to remedy the resulting evils by the present methods of punishment and revenge?

Kiernan has asserted that *furor sexualis* in the negro resembles similar sexual attacks in the bull and the elephant, and the running *amok* of the Malay. He further notes the sadism manifested by the negro in the torture or murder of his ravished victim. This is distinctly atavistic and occurs occasionally in whites.

Religious Emotionalism and Sex Crimes

The seeds of religion sown upon the soil of ignorance and superstition have had much to do with the development of criminality in the negro. Whether no religion at all would not be better for a large proportion of the lower-class blacks is at least debatable ground. When a low type of race is subjected to emotional strain, inhibitions are removed and primitive instincts or blood-thirstiness comes to the surface. The anabaptists of the Lutheran Reformation threw all restraint to the winds and indulged in sexual murders. These anabaptists were chiefly serfs who had been inflamed by fallacious notions of the clergy emanating from the time-honored text, "And they, the disciples, had all things in common, in love

preferring one another." Influences of this character affect the negro race in consequence of the quality of preaching that degrades.

There is more than an indirect relation between the emotional excitement associated with religious fervor in the blacks, and outrages upon white women. Angels are depicted as white, and their pictured beauty has a very disastrous effect upon the brain of the negro when his emotional centers are in condition of autoerethism characteristic of religious excitement. The result, in brief, is an inflamed desire for the possession of females of the superior race, and an increase of what may be termed sexual curiosity. A celebrated southern negro divine has similarly expressed himself. This clergyman said that, in his opinion, fewer white angels and more black ones would have a repressive effect on sexual crimes among the blacks.

The view that repentance upon the scaffold is a guarantee of divine favor is quite general, and is especially potent in its influence upon the blacks. The condemned negro who does not believe that he is heavenward bound as he stands upon the scaffold, or confronts the infuriated citizens of the community in which he has committed an outrage, is a rarity. Like poor, crazy Guiteau, he sings, "I'm going to my Lordy." It is not a long step backward from the pious and superstitious negro who, in the shadow of the gallows-tree, believes he is on the short-cut to heaven, to the Zulu who in battle courts death because the religion of his fathers has taught him to believe that an eternity of happiness lies just beyond the enemy's spear or bullet. The indifference to death which heredity and religion—both heathen and Christian—have imparted to the negro, associated with the moral anesthesia of the more degraded of the race in America, is one of the chief factors in defeating the aim of capital punishment, viz., repression of crime.

Capital punishment is not a brilliant success in the repression of crime, even among the whites, whose nervous organization and sensibilities are more refined than the

blacks', and who, therefore, should be expected to have a keener appreciation of present existence and a greater dread of that "something after death" which makes cowards of most of us. Du Bois himself has said, "Of death the negro shows little fear, but talks of it familiarly and on only as simple a crossing of the waters, perhaps—who knows?—back to his ancient forests again."

The greater frequency of rape in the South is explicable in part by the climate, which is much more favorable to the perpetuation of the primitive impulses of the black race than is that of the North. Reversion of type—both physical and psychic—is more likely to occur under the influences of the climate which most nearly

approximates that in which the race was originally bred. The influence of climate upon the sexual function is powerful in even the Caucasian. Seasons also have their influence,⁶ as every student of sexual physiology well knows. Aside from the influence of climate, the northern and southern negroes are, on the average, widely different, physically, intellectually, and as social factors.

As to the remedy for rape, there is but one—total ablation of the sexual organs. One emasculated rapist in our social system is worth much preaching and a multitude of hangings, legal or illegal. And let us be impartial. We should give the white rapist exactly the same medicine we give the negro rapist.

Clinical Notes on Cardiac Irritability, or Cardiac Neurasthenia

By BEVERLEY ROBINSON, M. D., New York

IN this trouble of the heart I have found, by experience, that some widely received statements are not wholly reliable, and also that there are exceptions to many accepted rules.

To begin with: I fail to recognize in strychnine a remedy of much value in these cases. After giving this drug in moderate doses for days or weeks, the patient is not sensibly any stronger or better for its use. On the contrary, it has increased manifest nervousness, produced wakefulness at night, and did not give greater strength to the heart-beats or to the general system.

In certain instances, in view of obstinate constipation, especially among women—and despite this knowledge—I have been obliged to continue it in small doses, once or twice in the twenty-four hours, combined with aloin and belladonna. The belladonna in these cases is quieting to the heart as well as relaxing to the bowels.

The two tonics, or cardiac stimulants, which have most immediate good effects are

caffeine and strophanthus. The former should be given as the citrate and the latter as tincture, and both in tablet-triturate. In this form they are less objectionable to the stomach. And this is important practically, because frequently stomachal intolerance is an accompaniment of functional cardiac disturbance. I know of no way so universally good of giving certain tinctures as the tablet-triturate form, and those of our best homeopathic pharmacies, it seems to me, are preferable because of the use of mother-tinctures and the more perfected trituration, in addition to the fact that they use the fresh plant for preparing their tinctures. Digitalis in this form may often be used advantageously for a while, after stomachal intolerance has subsided—scarcely ever before that.

With palpitations, frequent heart-beats, somewhat irregular and feeble pulse oftentimes, and faintness and pallor coming on

(⁶) "Influence of Seasons upon Conduct." Leffingwell.

suddenly, there may be marked facial flushing, bad headache and even marked dizziness. Nothing seems to relieve these symptoms so rapidly as caffeine citrate, in 1-2 to 1-grain doses, repeated in three hours or less.

Cactus a Valuable Remedy

Formerly I made use of cactus, and while I recommend it in some instances, it does not act as rapidly as caffeine and should be reserved for patients in whom one wishes slower and more continuous effects. That wise and experienced observer, Dr. Roland G. Curtin of Philadelphia, has had happiest results from the combined use of cactus and digitalis. (*Therapeutic Gazette*, Nov. 15, 1908.)

No local applications, such as cologne, camphor spirit, ammonia, mustard spirit, etc., have much beneficial effect, at times without the use of caffeine internally. Quiet, rest, freedom from noise and excitement, continuously and for weeks at a time, is all-important.

The meals should be light, nutritious and easily assimilable. The evening meal should be of milk toast, crackers, arrowroot, blanch-mange, custard, broths of meat, or light soups of other kinds (rice, potato, celery, etc.), usually strained.

It is wiser to avoid meat *absolutely* and even fish at the evening meal, which should be taken between 6 and 7 p. m., going to bed at 9 o'clock.

Any stomachal or intestinal intolerance is quieted and relieved permanently better with milk of bismuth, frequently repeated, than in any other way I know. It is one of the best of intestinal antiseptics, and not in the least injurious. When it fails, or alternating with it after a few days' or weeks' use, one or two lactobacilline (lactic-acid) tablets should be taken. At times these act marvellously, relieving headache, promoting sleep, quieting the nerves, regulating digestion, and apparently reducing gastrointestinal autotoxemia. Then again, and for no obvious reason, they are without effect, bad or good, so far as may be determined.

The best of all nerve tonics in these cases is the glycerophosphate of lime and soda, combined in 5- to 10-grain doses, three or more times a day, and preferably taken after eating, and even if eating only very lightly.

The Use of a Hypnotic

If any hypnotic is required (and they are all bad except as a makeshift), bromural is the least objectionable, in 5- or even 10-grain doses. It soothes the jaded nerves and gives quiet sleep for several hours. It is well to bear in mind that gentle massage treatment, especially of the lower limbs, just before retiring, will bring on restful slumber when otherwise a wretched night and a demoralized awakening are the sure prospect.

I might readily add to the foregoing notes, which are the result of close watching and doing, and will prove valuable, I am confident, to someone who, like myself, has often "borne the burden and heat of the day."

[Dr. Robinson's experience with strychnine harmonizes with our own. We do not find strychnine the remedy for these cases of cardiac irritability in which cactus has given such satisfaction, and reiterate our belief that when one of these remedies is indicated the other is not. We do not like tablet triturates: if they are lightly compressed they chip off or disintegrate; if firmly compressed to a pearly consistence they pass through the bowels undissolved. We prefer the milk-sugar granule for these reasons; it is soluble and doesn't chip off readily.]

We need new studies of the whole group of heart tonics, based on the questions of which function, which part of the cardiac mechanism, each tones; how soon, how much, how lasting. Dr. Robinson gives an illustration of what may be done by a close observer in his use of caffeine for a quick effect, cactus for a more enduring action. As general tonics we wish Dr. Robinson would try the arsenates. Who will extend our knowledge along this line?—ED.]

Alkaloidal Therapy*

By G. H. SUMNER, M. D., Waterloo, Iowa

Secretary of the Iowa State Board of Health

DR. CHASE, the chairman of this section, has asked me to prepare a paper of fifteen minutes' duration on the subject of "Alkaloidal Therapy." In responding to this request, I shall not try to produce an olio but shall endeavor to give the *sine qua non* in therapeutics.

The three essentials in successful therapeutics are *promptness*, *accuracy* and *minimum dosage*. There has never been any controversy in regard to the first and second. The last-named, minimum dosage, has been in the past and will be in the future the subject for discussion.

Holmes has well said that "when facts are numerous and unmistakable and unequivocal in their significance, theory must follow them as best it may;" keeping with their step and not going before them.

The Progress of Twenty-five Years

During the last twenty-five years more progress has been made in the diagnosis and treatment of diseases than in the preceding one hundred.

Operations considered impossible in 1870 are now easily and safely made by thousands of surgeons.

The death-rate in infectious, contagious and many other diseases has been greatly reduced. Many diseases have been shortened, all ameliorated, and some altogether aborted.

The amount of good done by the x-rays, Finsen light, static electricity, vibration, etc., cannot be appreciated or estimated.

Opium, morphine, alcohol, heroin, hyoscine, codeine, cocaine, chloral, and other toxic drugs, habitually used, produce diseases which readily yield to modern methods and systematic treatment.

This shows in a measure our progress in professional skill.

With the exception of a few drugs—by no means all even of the so-called specifics—remedies are given because experience has shown that they do good in certain diseases or relieve symptoms.

Empiricism is today almost the sole basis of therapeutics. To decry the use of such agents because their action cannot be theoretically explained or demonstrated by "*in vitro*" experiment is neither scientific nor common sense.

The theorist may criticise but the clinician is the court of last resort, and results are the object to be attained.

Having said this much in a general way, I am now constrained to say that to him who is accustomed to seek for the underlying causes of phenomena presenting themselves, the present attitude of the medical profession and of the public at large toward drug medication is significant. To comprehend the situation, we must go back to the time when drugs were administered with no other guide than a routine course of treatment as laid down by some author. Of the how or why of their action the physician was ignorant. He only knew that under certain conditions, when drugs were administered, the patient recovered or died. As superstition and ignorance were dissipated by the light of knowledge, the action of drugs was questioned; and, as the inevitable reaction followed inordinate dependence upon these agents, public and professional faith in them was becoming extinct.

Oliver Wendell Holmes voiced the coming nihilism when he suggested that if all the drugs were thrown into the sea, it would be better for mankind but worse for the fishes. This smart saying has since been repeated with innumerable variations, so frequently that it seems to have become firmly implanted in the subconsciousness of the public. For this pessimism there existed only too much reason in the imperfection of the drugs of the *materia medica*. Our medicines were

*Read at the last meeting of the Iowa State Medical Society and reprinted from the Journal of the Iowa State Medical Society, Oct. 15, 1909.

nauseous, uncertain and variable in action, and too frequently ineffective. Much of this was due to the variability necessarily inherent in vegetable preparations.

Reasons for Drug Variability

The medicinal elements found in plants were not prepared by the mother plant expressly for the use of man, but to fulfil certain offices in the vegetable economy. Under varying conditions of sun and shade, moisture and dryness, soil, season, etc., the active constituents of a plant vary as to their nature and their quantity; and, as these were practically unknown to those who collected the drugs, the result was a variability in the nature and the extent of the action of the various preparations made from these plants, which sometimes veered about the entire therapeutic circle.

To take an example, very frequently quoted, *jaborandi* contains two antagonistic principles, one of which tends to induce sweating, salivation and a flow of the mother's milk, while the other antagonizes these three actions, drying up the three secretions mentioned. Sometimes the plant develops one preponderatingly, sometimes the other. Consequently we may have precisely antagonistic action exerted by some specimens of the plant as compared with those exerted by others.

In a number of vegetable remedies a similar antagonism is shown, as for instance *hyoscyamus*, *opium*, and *gelsemium*; while in others, as the *cinchonas* and the *strychnine* group, the active principles, although present in variable quantities, exert a remarkable harmony of action. Of the many active principles existing in *cinchona*, the four which have received study differ only in the quantity of the effects they exert, and but little as to the quality. I refer to the four alkaloids: *quinine*—the most valuable; *quinidine*—the strongest antiperiodic, but present in very small quantity; *cinchonine*—the least valuable; and *cinchonidine*—one-half the strength of *quinine*.

It is a reasonable inference that the old *materia medica* would never have been deserted as it has been, had it been good

enough to fulfil the need. *It was not good enough* and the profession and public looked for something better. For a time this was supplied by the enterprise of manufacturing chemists. These gentlemen devised for us compound preparations, each designed to fulfil a certain number of indications, with a remedy in acceptable form and covering as many therapeutic applications as the ingenuity of the chemist could devise. These were tried and in many instances proved efficient. The faith that was waning in the old, crude *materia medica* was reposed upon the new, and many a physician put his faith, and does yet, upon these products of the manufacturer's skill. Whatever may be said against the medical proprietary, we must give it the credit of having sustained faith in drug therapeutics during a critical period.

The No-Drug Methods

In the meantime there had arisen an innumerable brood of no-drug therapeutic methods. Most of these originated outside the medical profession. The public was taken with their novelty and patronized generously the introducers. This led physicians to investigate, with the hope of finding something to take the place of the now discredited drugs and to avail themselves of the popularity of the novelties. To a certain extent the physician is unable to obtain as satisfactory results as the quack. The knowledge of pathology makes the man who knows hesitate at promising a cure, whereas the man who is supremely ignorant of physiology and pathology has no such scruples. Moreover, when a practitioner uses only one remedy for all diseases, a knowledge of pathology is superfluous. He does not have to make a diagnosis, since in any case his therapeutic application is the same.

The law has recognized these facts in so far that it permits such practitioners as have had no education in the science of medicine to employ their special therapeutic measures in the treatment of the sick, in fact to do everything except the prescribing of drugs. This has wisely been restricted to the regu-

larly educated physician. Unfortunately, instead of availing ourselves of this priceless monopoly and developing drug medication to the utmost, we have tamely assented when the practitioner, who did not know how to use drugs and was legally debarred from using them, stoutly asserted that they were of no use anyhow. We have thus given our sanction to this assertion, to his enormous benefit and our corresponding detriment. Since we alone are permitted to use drugs, it would seem the part of worldly wisdom that we should therefore develop our monopolized field to the utmost extent of its possibility. We should ascertain just how much can be done by drugs and then do it. For this purpose the widest experiments should be made, not only in the laboratories upon animals, not only upon human beings in a state of health, but especially and above all upon those whom we are called upon to treat.

In order that such experiments may have value, it is absolutely necessary that the agents which are employed be uniform and unvarying in their effect; or by no possibility could we imagine a uniform and unvarying action to be predicated of a drug whose composition and effect are neither uniform nor invariable. We cannot positively and certainly assert the power of opium to relieve convulsions, since under some conditions opium powerfully induces convulsions. We are compelled to make our studies upon morphine, which, whatever else may be its fault, does not do one thing today and something else tomorrow, but under most conditions exerts precisely the same action when given in the same dose under the same circumstances.

The Active Principle—This Is What Counts

We take up, therefore, the vegetable materia medica, and what do we find? In each medicinal plant the therapeutic action depends on certain elements which we call the active principles as distinguished from the inactive, or inert, parts of the plant; and, if a part is inert, why should we use it? In point of fact, the really valuable proportion of every plant-remedy is exceedingly small.

Let us assume one percent as the average part of a drug that is really active as a medicine. The remaining ninety-nine percent is simply encumbering dirt. It is worse than useless, because it makes the dose one hundred times larger than it need be, encumbers the stomach, hinders the action of the digestive fluids in dissolving out and utilizing the remedial parts of the plant, and renders the dose irritating and difficult for the stomach to retain. An enormous advantage is therefore gained by leaving out the useless dirt and using only the real active part of the plant.

This active part of the plant, however, is not uniform. There may be all the way from one to thirty different active principles in the single plant, each having an action different from all the others. These principles are also, as I have said, developed unequally in different specimens of the plant. We may have eighteen percent of morphine in opium or we may have none at all. In hyoscyamus we may have an excess of hyoscyamine, that element which induces sleep, or an excess of hyoscyamine, the element which, on the contrary, prevents sleep.

In *uva ursi* we have a very valuable medicament for catarrhal affections of the bladder. I refer to arbutin. We find, however, in this plant that one grain of arbutin is accompanied by thirty-five grains of tannic acid. In France arbutin has proved remarkably successful in the treatment of the worst forms of gonorrheal cystitis, the remedy being given in doses up to forty-five grains per day. We thus find that in order to administer the forty-five grains of arbutin to our patients, if we use the plant itself, we are compelled to give with it fifteen hundred seventy-five grains of tannic acid, a dose which would assuredly kill a whale. This reduces the plant *uva ursi* from the position of an effective agent in this disease to that of a very mild, uncertain adjuvant, which is practically used, if used at all, only as an excipient remedy.

Why Swallow the Dirt?

Throughout the whole vegetable materia medica the same principle holds good with

the older drugs. We swallow incalculable quantities of dirt; some of this dirt, although not inert, exerts an effect which is injurious as well as undesirable, yet we swallow it, for the sake of the minute quantities of active principle which alone we require. It seems a very simple matter that we should extract the active principles from the plant and use exactly the ones we want in exactly the dose we need—and this is the whole sum and substance of the alkaloidal therapeutics.

It is to be noticed that, with some exceptions, the proprietaries are just now being loudly denounced. These exceptions refer to a class of patent medicines known as the synthetics. Most of these originate in Germany. All are protected by patents or other forms of monopoly, so that if the physician desires to make use of them, he is compelled to pay whatever tribute the owner wishes to exact. Nevertheless, they partake of specific values of the active principles of plants, in that they are for the most part simple, definite remedies of uniform composition, whose effect, once ascertained, may be confidently expected from every dose of the medicine which may be administered.

This brings me to what is, in one respect, the most important point of this paper, the fact that the active principles are not monopolized. No patent, copyright or other form of monopolistic control exists in the case of aconitine, digitalin, quinine, morphine, or any other of the active principles of plants. They are absolutely free for every physician, druggist or other person to manufacture, buy or sell, at his own sweet will.

The Rise of the New Materia Medica

From the ruins of the old materia medica a new and better one is arising. It is simple, comprehensible, unmonopolized. It is based on simple principles which cannot be denied; that is, that the remedies to be used should be unvarying, that each of them in a given dose should invariably exert the same effect, in quality and in quantity. Not but that the reaction of the patient may differ—and here is an element of uncertainty which we cannot control, except by the skill of our diagnosis. But the remedy under the same

conditions must always exert exactly the same action. This gives us, as has been said, one firm footing. Starting with this certainty, we can build far, just as measuring a comparatively small line on the surface of the earth enables us to compute the distances between star and star.

It has been claimed, and it is true, that the use of these definite, uniformly active remedies compels the physicians to a closer study of pathology and physiology. For a uniformly acting remedy is worthless in the hands of a physician who cannot recognize distinctly the disordered condition of his patient's economy to which these remedies are to be applied.

The use of drugs is based, as I have said, on simple principles. We have in these remedies agents which exert a certain effect upon the human economy in disease. This effect is a raising or lowering of some one or other of the vital functions. Granting that drugs do exert some effect on the human body, it is up to us as physicians, knowing exactly what this effect is, to look in our patients for those conditions which need to be altered in the way each drug alters them. If we know that a certain function in the body is raised by a certain drug, and we recognize in our patients that that particular function in the body is below the normal in its activity, what is there more simple than to give this drug in doses enough to raise that function to its normal action? This restores the physiologic equilibrium which constitutes health. It is an exact scientific method of medication. It may be that the drug acts by removing the cause which depresses or elevates the disordered function, or it may be that it acts in some other way. This is a matter for individual attention in each individual case, but it forms no part of the present discussion. If we admit that drugs have an action upon the human body, the rest follows logically.

It is up to us to study the physiology and pathology of the human body so thoroughly that we will be able to recognize pathologic conditions as they arise. In the meantime we study our drugs in such a manner that we know, when we have recognized any

pathologic condition, exactly the remedy to be given to restore health.

The theory is simplicity in itself; its application is inexpressibly easy. In the vast majority of cases that come to the physician he is able to recognize the disorder. He may even be more ready to recognize a disorder than to assign it a name, for there is a radical difference in the study of disease as systematically classified in our textbooks, and the study of disease as it presents itself to us in the sick room.

The Treatment of Hyperpyrexia

I will take for example only the familiar one of hyperpyrexia. No practising physician confronted with a temperature of 106° or 107°F. stops to make laboriously an exact diagnosis of the disease to which the hyperpyrexia is due. He at once goes to work to subdue the hyperpyrexia, and bring the temperature down to a degree that is compatible with the continued life of the imminently imperiled nervous centers. While I am far from inculcating a neglect to classify disease, I wish to insist on that more direct and more important form of diagnosis which consists in recognizing the departure from health, the disease-conditions, and the instant application to them of the remedies which we know will tend to restore health.

The direct application of drugs to disease-conditions thus presented grows to be a custom with those who employ the active principles. It cannot be looked upon as an evil; but on the contrary, it smooths the way for the young practitioner, removing from his path most of the difficulties which he encounters, when he endeavors to transfer the knowledge he has obtained in his college course to the varying conditions presented by the sick-room. It sweeps away from the path of the physician most of his competitors. For no advertising quack, osteopath, Christian scientist, or other suggestive practitioner can compete with the thoroughly equipped physician who sits down by the side of his patient, correctly estimates the conditions under which the patient is suffering, and correctly applies the proper medicines in exact dosage sufficient to restore

health. Here is a field where we are supreme; and the more we cultivate this field the more we eliminate our unworthy competitors and regain the confidence of the public.

The advantages of this method are numerous, the disadvantages are only apparent and disappear when it is put in practice. For the first time in the history of medicine the dosage of remedies has been reduced to an exact-science. Too little dosage or too great dosage is impossible under the system employed, whose minute doses of remedies in a shape to be rapidly absorbed and put to work are repeated at close intervals, until we have obtained exactly the desired effect, no more and no less. The remedy is then stopped, or continued at intervals just enough to sustain the desired effect. There is no overstimulation by each dose, followed by a perilous depression between doses. The action is uniform and continuous. The certainty with which the desired results follow the use of the medicine imparts a charm to the practice which was never realized before.

Nearly every army in Europe has adopted this system of medication. The portability of the remedies and the ease with which they are instantly administered, without the need of water or other excipients, commends itself to the army surgeon. When thirty thousand doses of medicine can be reduced from a load for an army mule to a case which can be carried in the overcoat pocket, the advantage is obvious. Some of you present here may recollect the time when for the cure of malarial fever patients were compelled to swallow an ounce of cinchona bark. Not even the whisky which was liberally dispensed as a vehicle would induce the stomach in every instance to retain the desirable dose.

We now a-days accomplish the same end much more effectively by the administration of ten to fifteen grains of quinine. In this we have all appreciated at least the point of the alkaloidal practice. Moreover, we know that we can obtain from quinine many useful services which were practically impossible as long as we were limited to the

use of the Peruvian bark. New avenues for the usefulness of this powerful medicament have been opened by its being furnished in the alkaloidal form. We have been slow to realize that the same enormous benefits may

be attained by similarly treating each of our vegetable remedies. When we do so, we shall commence also to realize the enormous possibilities for good lying in this little-cultivated field.

Ventral Hernia: Its Ill Effects and Possible Cure

By C. FLETCHER SOUDER, M. D., Philadelphia, Pennsylvania

REPORTS of abdominal operations state that from five to ten percent result in ventral hernia. The plan of arriving at an estimate at a certain large hospital, on the statement of an attending surgeon, was to wait about three months, then to consider the patient cured unless he returned in the meantime with a ventral hernia.

As to this method, should a ventral hernia develop in a given case, would not the patient, in many instances, feel disgruntled and go elsewhere or not report to anyone? Are such statistics at all reliable? Do not a large percentage of ventral hernias develop months and years after the operation, and is this lesion not liable to occur at any subsequent time?

The Course of Ventral Hernia

What is the most likely course a ventral hernia will follow? The hernial opening may remain small, but the tendency is to increase in size and grow worse and it may eventually extend along the entire length of the incision. The incised muscles may remain firm and in good condition, or there may be partial or extensive atrophy, frequently involving the greater part of one side of the abdominal wall. The atrophy of the affected muscles may be so complete as to render it difficult to determine where the hernia begins and ends, or whether a hernia actually exists. The writer has met with numerous cases in which the entire incision had broken down and the severed muscles were so completely absorbed as to require

the probable cutting out of all the abdominal wall extending from the median line to near the back and possibly ten inches in breadth were an attempt made to relieve the condition by another cutting operation. If you have not met with similar cases you cannot well imagine the extent of the havoc wrought, or the difficulty that would be experienced in attempting to relieve or cure the injury.

Other Results of Cutting Through the Abdominal Wall

What other conditions are liable to result from cutting through the abdominal wall?

Is not the wound liable to slough and discharge for months or years afterward and probably result in ventral hernia? Are not stitch-abscesses liable to occur months or years afterward and forcibly terminate in ventral hernia? Is not much of the distress and suffering so frequently complained of by patients following abdominal operation usually due to adhesions having taken place between some portion of the abdominal organ and the wound or stump even though no hernia exists? Does it not require constant care to prevent adhesions from taking place between the border of a hernia and the protruding tumor?

Is it not doubtful whether surgical methods will ever be able to overcome entirely the liability of ventral hernia developing following abdominal operations, however successful and skilful the operator may be? Although Castro, ex-president of Venezuela, traveled thousands of miles to engage the services of a noted surgeon, the reports state

that a ventral hernia has developed in the line of the incision, thus serving to prove that it is beyond the power of the surgeon to prevent such an accident.

What can be done to cure or control these conditions? Can another cutting operation be depended upon to cure permanently a condition of its own making, due to failure and when other dependent conditions are usually less favorable than existed at the first operation?

Castro and His Hernia

At the present writing, Castro has not undergone another cutting operation for the cure of his ventral hernia. If the chances of success were favorable, is it likely that he would have attempted a return voyage to his native country without having had it attended to? Does his case not also serve to prove that while a cutting operation can bring on such a condition, surgeons are now helpless to benefit them except by another operation, and that that is not always advisable?

It is doubtful whether any other treatment or means offer as great prospects of preventing, checking or curing ventral hernia, in its earliest stages at least, and with as little risk, as does the injection-treatment.

If Castro's condition is due to an ordinary ventral hernia, and if the opening be small, in all probability a few injections of alcohol or possibly a stronger fluid, if given at the first appearance of the breakdown, would have closed the opening and possibly prevented further damage occurring, and the report would not have been spread all over the civilized world that this conspicuous man returns an invalid and has to be carried on a stretcher. While no criticism is intended toward those who have had his care in charge, as they doubtless exercised every precaution known to them, has not the wide publicity been injurious to the value of operations in the minds of the public?

The following case is presented in detail in order to give an exact account of the pa-

tient's condition and what has been accomplished by the injection-treatment.

The patient was operated upon during February, 1908, for appendicitis. A ventral hernia appeared in October the size of a dime and one inch from the line of incision, following a stitch-abscess. A finger passed readily through the opening. The surrounding muscles were firm and in good condition. The patient received, during November, four injections of from 5 to 10 minims of 95-percent alcohol a week or so apart. At the present time, 17 weeks after the last treatment, the hernial opening is closed, union is perfect, and there is no depression upon palpation. During January, 1909, marked bulging and a depression appeared near and at the side of the incision, an inch or so higher up, the size of a quarter. The opening was not complete nor were the borders distinct. Four injections of alcohol have been given since. For a while the condition seemed to spread toward the first hernia, and indications were that all of that part of the wall would become involved as well as the adjoining side of the incision. While there still remains some slight bulging when the man stands up, the affected area is now much thicker, firmer, and much less depression is felt on palpation.

Muscular Atrophy

Where there is extensive atrophy of the muscles or where the opening is large, no efforts, so far, have been made to heal these conditions. From past experience in healing other small ventral hernia, the writer feels justified in calling the attention of the profession to its possibilities. A more astringent or irritating fluid than alcohol alone may be required.

Are not many cases of ventral hernia now hopelessly incurable, and will those persons not continue to endure constant annoyance, suffering disability and possibly invalidism, the rest of their lives? If so, is not ventral hernia a serious matter, and is it not better to avoid subjecting patients to the possible occurrence if it can well be avoided?

Examination of Stained and Unstained Blood Specimens

How It Aids in Diagnosis and Treatment

By J. FAVIL BIEHN, M. D., Chicago, Illinois

Former Director Laboratories of the City of Chicago; Director Scientific Research Laboratory, The Abbott Alkaloidal Company

ALTHOUGH hematology is one of the most important branches of diagnosis, very few physicians realize its value sufficiently to utilize it. This is mainly owing to the fact that it has been taught in our medical schools for a few years only, and then merely in a perfunctory manner. Its infrequent use is probably also due, in a measure, to the belief on the part of many that complicated and expensive apparatus is required and that there is also much labor involved.

While it is true that it is a somewhat delicate and complicated procedure to count the red and white corpuscles by means of the Thoma-Zeiss apparatus, this is not the only and in fact not even the most valuable portion of hematology. It is true that an enumeration of the number of red corpuscles is usually necessary to determine the presence of anemia, except in its graver forms, when a diagnosis is easily made by other clinical methods.

How to Estimate Hemoglobin

The estimation of the hemoglobin by the Tallquist method is a very simple procedure, just as simple as the recording of the temperature by a clinical thermometer, and should come into more general use. This alone will often give an indication of the condition present.

Any of the anemias, even in their very early stages, whether they occur alone or in combination, may be very readily diagnosed by the determination of the color-index. The method is as follows:

Divide the percentage of hemoglobin by the percentage of the number of red corpuscles. To obtain the percentage of the number of red blood-corpuscles, multiply the first two figures by 2. Example: 3,400,000

is 68 percent; if the hemoglobin is also 68 percent, the patient has a color-index of 1, which indicates that each corpuscle has its full quota of hemoglobin and the patient is suffering from a secondary anemia—a simple reduction in the number of red corpuscles, due to some intercurrent disease.

It is obvious that such a case will receive more benefit from remedies directed to the cure of the underlying pathological condition with strychnine, arsenic, etc., than from the exhibition of iron. *Iron will not make red blood corpuscles.*

A patient with 4,500,000 red corpuscles has 90 percent of red blood-corpuscles. If the hemoglobin is 80 percent the color-index will be 0.8. This patient has a slight anemia, because there is a reduction of 10 percent in the number of red blood-corpuscles, and also a slight chlorosis, since the color-index is below 1.

In this case iron is indicated to increase the amount of hemoglobin, and arsenic and like remedies to increase the number of red blood-corpuscles.

In chlorosis, while the number of red blood-corpuscles is usually very nearly normal, the hemoglobin is markedly decreased, therefore the color-index is very low, in some cases being only 0.2. This explains why these cases react so readily to iron medication.

The Red Cells and Their Significance

In pernicious anemia, aside from the characteristic blood-picture, nucleated reds, etc., we have a very severe degree of anemia, there being often only 1,000,000 red blood-corpuscles, or 20 percent of the normal amount. The hemoglobin also is decreased, often to 40 percent; but if we estimate the color-index, we find that it is 2. This means that nature is attempting to make up for

the loss of red blood-corpuscles by increasing their size and doubling the amount of hemoglobin in each. In this disease the exhibition of iron is of questionable value.

In the general field of diagnosis, aside from the anemias, the leukocytes, especially in a differential count, play a most important part. The blood examination alone will not enable us to make a diagnosis in all cases, yet there are a few conditions that can only be positively diagnosed by this means, such as malaria, lymphatic and splenomedullary leukemia, trichinosis, trypanosomiasis, etc.

Leukocytes and Leukocytosis

The counting of the number of leukocytes is only of relative value. A condition in which an increased number of leukocytes is present is termed a leukocytosis. Owing to the fact that there is a physiological as well as a pathological leukocytosis, and that most clinicians use merely the term "leukocytosis," considerable confusion has arisen.

A leukocytosis, that is, an increase in the number of white blood-corpuscles over 7000 to 10,000, may be physiological, and occurs in infancy, during the latter months of pregnancy and for some weeks after delivery, after violent exercise, after cold baths, for two or three hours after a meal (digestion-leukocytosis) and during the death agony. This *physiological* leukocytosis can easily be recognized by the fact that the percentages of the various types of leukocytes are normal.

Five Diseases Characterized by Reduced Leukocytes

A reduction in the number of leukocytes, or a leukopenia, is practically always pathological and occurs in the following five diseases: tuberculosis (unless accompanied by secondary infection), typhoid fever, measles, malaria and influenza.

From this fact any one of these diseases can be differentiated from all others not included in this group by merely counting the number of leukocytes, or one can determine this fact by the simple examination of even an unstained smear after a little experience.

Normally the red and white corpuscles are present in a proportion of from 700 to 1. If, therefore, in looking at an ordinary smear, several thousand red corpuscles are seen to one leukocyte, the condition is one of leukopenia. On the other hand, if there are two or three leukocytes or even four or five in every field, using the No. 7 objective, the condition cannot be malaria; and if over 70 percent of the leukocytes are neutrophils (polymorphonuclears) the condition is probably septicemia, with endocarditis.

I have seen a number of such cases in which a diagnosis of malaria was made until a single glance at a stained smear of the blood demonstrated the above-mentioned condition, thereby entirely excluding even the possibility of malaria, although the general clinical signs were strongly indicative of this disease.

Importance of Blood Count for Differential Diagnosis

A similar examination, which requires at most three or four minutes, will decide immediately the differential diagnosis between scarlet-fever and measles, pulmonary tuberculosis and chronic bronchitis, influenza and chronic bronchitis, or influenza and pneumonia, and by this means we can determine at once that a patient presenting symptoms of pneumonia really has typhoid fever, beginning with pneumonic symptoms. Who of us has not been misled, at least for a time, by just such cases?

In scarlet-fever, bronchitis and pneumonia we have an increase in the number of leukocytes and an increase in the percentage of neutrophils; they generally average 85 to 90 percent, the normal being about 70 percent.

Prognostic Significance of Leukocyte-count

The number of leukocytes is of value only for prognosis and in suggestion for treatment. The diagnosis must always rest on a differential count. This gives us additional information; it is a part of the symptom-complex only, but is one of the most reliable objective symptoms. The number of leukocytes bears no relation to the extent of the

lesion, to temperature, etc.; they are only a measure of the resistance of that particular patient to that particular infection.

An increase in the percent of neutrophiles, irrespective of the total number of leukocytes, means either a purulent infection or some infectious disease other than tuberculosis, typhoid fever, measles, malaria, influenza. Given a pathological leukocytosis, a neutrophilia of over 85 percent, we have positive evidence of the presence of pus or gangrene.



Method of making a blood smear with two glass slides

If the neutrophiles are below 75 percent, irrespective of the number of leukocytes, there is no pus, no acute inflammation anywhere in the body.

A patient with clinical symptoms of appendicitis, with 70 percent or less of neutrophiles, has no pus in the appendix, unless he is overcome by a very severe infection and shows clinical symptoms of collapse. This condition is present in about 80 percent of all cases of pneumonia. With a severe infection and no leukocytosis or with a decreasing total number of leukocytes we may expect a fatal issue.

If the number of leukocytes remains high after the crisis in pneumonia, we have a case of delayed resolution, empyema or gangrene. This is always accompanied by a neutrophilia.

The examination of a stained blood smear will enable us to differentiate immediately between a serous and a purulent effusion. In serous effusions the blood is normal; in purulent effusions we have a typical neutrophilia.

Blood Smears and How to Make Them

The preparation of smears is a very simple procedure. The best smears are made upon slides, which must be thoroughly cleansed by breathing upon them and wiping them off with a clean soft linen cloth. The smear

is then made as follows: A small drop of blood, usually not much larger than an ordinary pinhead, is drawn from a prick in the ear with a sterile needle, and perfectly fresh, just as it exudes from the puncture, is placed upon the slide near one end. This drop is now spread over the slide as thinly as possible by means of the end-edge of another slide, which is drawn across the first slide, using only a gentle pressure and holding the slides at an acute angle. This produces a smear that in at least some part will present a single layer of corpuscles. Or, the drop of blood may be spread by means of a piece of tissue paper (a cigaret paper answers very well), one end of it being placed upon the drop of

blood, which is allowed to spread out as much as possible by capillary attraction, and then by drawing the paper along the slide, leaving in its wake a single layer of corpuscles. In this manner one is less likely to distort the red blood-corpuscles.

The specimen is now fixed by being placed in wood-alcohol for ten or fifteen minutes and then stained with Delafield's hematoxylin for one or two minutes, thoroughly washed in water and counterstained with aqueous eosin. There are no difficul-



Method of making a smear with cigaret paper

ties whatsoever with this method of staining and it gives a very clear picture, all the histological elements being well differentiated.

Staining for Parasites

If we wish to look for parasites, the best method is to stain the smear, directly after it has been dried, by placing it in a jar containing a saturated solution of eosin in wood-alcohol. From this stain it is placed in a saturated solution of methylene-blue in wood-alcohol, without washing between the two stainings. The time required

is twenty seconds for each stain. It is then washed by being immersed in a jar of water and gently moved to and fro. The methylene-blue is washed out by water being allowed to run onto the specimen, as is usually done with ordinary staining. This method gives better results than any of the single eosin-methylene-blue solutions. A complete description of it is given by Hayhurst, in *The Journal of the American Medical Association*, Dec. 4, 1909.]

Everyone recognizes that exact methods of diagnosis are essential to success. No continuous success can depend upon guesswork. Diagnosis is as essential to treatment as treatment is to cure.

Importance of Blood Examinations

Additional facts or diagnostic points in many obscure conditions are often obtainable only through an examination of the blood, and these facts often determine the weight of evidence for one or the other of two possible conditions. Here, as nowhere else in medicine, are negative findings of great value. The blood is practically the

only tissue that can be easily studied during life, and it reflects the changes of all other tissues because of its intimate association with them.

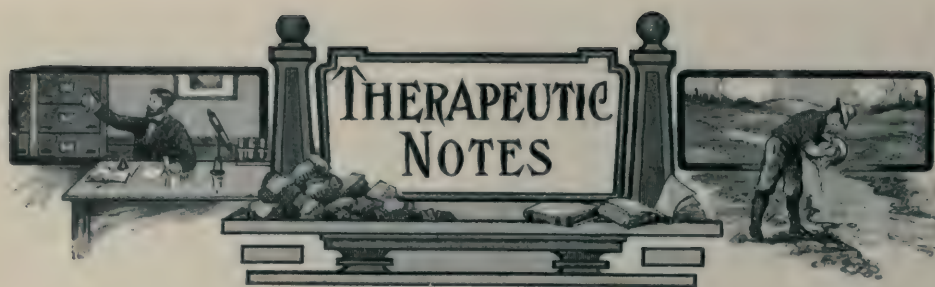
Surprising results are often obtained when least expected, yet we hear on every hand the complaint of the physician that he is too busy to make blood examinations. This is often true, but the successful busy man has someone else, who makes a specialty of blood examinations, do it for him. As a proof of this, the best men demand of the hospitals to which they take their patients that a properly equipped and supervised laboratory be maintained, and they make use of its aid in diagnosis at every opportunity. Other good doctors should have these facilities.

The number of physicians who use only the stethoscope and thermometer is becoming rapidly fewer; yet there remains an enormous number of those who examine the urine, or even a few who examine the sputum and stomach-contents in appropriate cases, and who yet neglect the examination of the most important of the body-tissues—the blood.

Growing Old

By GEORGE F. BUTLER, M. D.

AS we grow old we need to know that we shall remain young if we keep the heart young. Do not imagine because you are growing old, that you must fold away the quick appreciations and impulses of youth with your own youthful garments. Don't think because you are a man of business, or a sedate matron, that enthusiasm is out of character. There never was a forest so dark, or an autumn so late, that the sunshine could not filter through and change the gloom to vague, sweet twilight. There should never be a heart grown too worldly or too old to forget to worship beauty and loveliness wherever found, whether in the evanescent bloom of a sunset cloud, or in the spirit charm of a perfect character.—From "Treasures of Truth."



WHY HYDROBROMIDES?

The hydrobromides are especially useful for their calmant and depressomotor powers, said Burggraeve. Morphine hydrobromide is a powerful sedative of the lancinating pains of serous inflammations, meningites, pleurisies, pericardites and endocardites. Give a milligram every quarter hour till relief. Cicutine hydrobromide calms the lancinating pains of cancer; given with strychnine and hyoscyamine it stops painful spasms of stomach, bladder or uterus.

ACONITINE CURES TOOTHACHE

Tauplain writes of a pregnant woman who suffered from dental neuralgia, giving her no respite, day nor night. She was given aconitine, two granules every half hour, to be stopped when the tingling began. A few doses stopped pains that had endured three weeks without intermission. The pain returned two days later, when aconitine was again given. By checking hyperesthesia, as much nervous as vascular, this remedy usually arrests humid caries or changes it to the dry form.

NOISES IN THE EAR

A patient of Girard's had suffered for ten years with various annoying sounds in his one serviceable ear, ringing, rushing, hissing, etc., with progressive diminution of hearing. Despite electric and other treatment by Mènière, Villeroux, Miot and even Duchene, the affection persisted. "Then I thought of the active principles, from which I well know one need not ask miracles, but to which one

can apply—I know by experience—in cases reputed to be incurable." Burggraeve himself suffered from a similar malady, finding no cure but relief from the use of strychnine hypophosphite, aconitine and digitalin, three or four granules each at bedtime. The malady at least did not increase.

The value of pilocarpine in such cases was unknown to Burggraeve. A full dose at bedtime, a centigram hypodermically, for three successive nights of each week for a month, has proved more beneficial than any other treatment.

TREATMENT OF DIPHTHERIA

After discussing the unsatisfactory results obtained so far from the use of the anti-diphtheritic serum, Dr. Robert Tissot (*La Dosimetrie*, November, 1909) says that the serum acts only upon the diphtheritic toxins in the body without reference to the intoxicated organism, which must nevertheless be aided and assisted in its struggle in the reaction which it suffers under the use of the serum, and especially in its efforts at (tissue?) repair. The diphtheritic organism is ill, and it must struggle against its enemy before it can begin to recuperate its forces and to restore its intoxicated biogenic molecules. The organism is not only the soldier which defends the fortress. It is the fortress itself. We have here the primal truth which we cannot neglect without sin.

It is therefore necessary not only to kill the microbes which produce the toxins and to neutralize these toxins by calcium sulphide, adding if we wish, or better, if we can, the serum; but we must also sustain the heart by digitalin and strychnine so that

we may supply the circulation for the entire body with healing blood-plasma and the cells which it carries—cells which produce antibodies.

We must also increase the tension and the amount of the nervous force by remedies which act as vasodilators, especially to kidneys and heart, and thus supply these important organs with an increased amount of blood. Dr. Tissot claims that this plan of treatment is far superior to the exclusive serotherapy in being more complete and effective.

ALBUMINURIC AMAUROSIS

Burggraave says that essential albuminuria or analbumose, the disappearance of albumin from the blood, occurs because it is not combined with the salts, especially sodium chloride, and because the tissues lack tone and allow the albumin to escape.

For this iron is useful, especially the chloride; also strychnine arsenate, which is useful for neuralgic or eclamptic accidents, since these are due to infiltration of the nervous tissues. Albuminuric retinitis may occur instantaneously and disappear as suddenly. Three cases are described, all recovering under the use of salines, strychnine and phosphoric acid.

PSEUDO-TUBERCULOSIS AND PRE-TUBERCULOSIS OF WOMEN

Dr. George Petit, in a communication to *La Dosimétrie* (1909; No. 11) says that often women show all appearances of pulmonary tuberculosis, even to tubercle bacilli in the sputum, and that attention to a coexisting metritis promptly leads to recovery. He thinks that these patients have a more tuberculous bacillosis (Landouzy) than an actual tuberculosis, to which they are, however, inclined. In all cases observed the author noted a decided chlorosis or chloranemia. In spite of Trousseau's warning to the contrary he considers iron indicated. His treatment is as follows:

Give before each meal, strychnine arsenate, 1 granule; quassin, 2 granules; iron

arsenate, 2 granules. The iron preparations are properly changed, from time to time, the phosphate, lactate, valerianate being substituted for the arsenate. For a general tonic, tannic acid, 0.10 to 0.15 centigram is of use. The author has seen good results from injections of artificial serum. For nervous complications, monobromated camphor, for neuralgic and visceral pain, hyoscyamine or morphine hydrochloride are indicated.

MORPHINE ADDICTION AND SPARTEINE SULPHATE

In a contribution to *La Dosimétrie* (1909, No. 11), Dr. H. Vigouroux considers the various methods of treatment for morphine addiction, of which that of Levinstein, involving the sudden withdrawal of the drug, has the disadvantage of being brutal and causing intense suffering, while the gradual withdrawal, after Erlenmeyer, and the slow method require undue periods of time. The method of substituting some other drug in place of the morphine, such as cocaine or ether, tends to add another addiction to the morphinomania.

Dr. Vigouroux has obtained excellent results by diminishing progressively the dose of morphine, and adding increasing doses of the sulphate of sparteine, which although in no manner a curative agent in the addiction serves as a means of combating the physiological misery caused by the suppression of the morphine. Sparteine acts as a direct heart tonic. It not only increases the contractile energy of the heart but subjectively tends thereby to encourage the patient, and, as Dr. Guimbail expresses it, "to put new heart into him."

The author cites the case of a young physician, who by this method successfully was cured of his addiction in twenty days (during the last two weeks of which time he had taken no morphine), after two unsuccessful courses of treatment by other methods. Moreover, he had, for the last five days, been able to take walks of an hour and a half to two hours without any fatigue. [Among the heart tonics which are currently prescribed,

sparteine is perhaps unduly neglected. Dr. Vigouroux's note suggests an important use for this reliable cardiac tonic in an affliction which is difficult to treat as it tends to relapse.—ED.]

THE OXYGEN-BATH

Friedrich Grosse, in *The Practitioner* for September, 1909, describes an adaptation of Sarason's ozet-bath, which he calls the perogen-bath and in which oxygen is developed in the bathing water by a chemical process. The oxygen is produced by the action of manganese borate upon sodium perborate added to the water, which should be a little below the temperature of the blood. The oxygen-bath usually is given as a full bath, but other forms, e. g., hip-baths, are also recommended. The patient should stay in the water from fifteen to twenty and even thirty minutes.

✱ The principal action of the oxygen-bath is sedative, as shown by its quieting effect on pulse, respiration, and blood pressure. This suggests as indications insomnia and other nervous conditions, especially of hysterical nature. Grosse also emphasizes the possible suggestive effect of the baths. The only contraindication for the oxygen-baths is in conditions associated with a low blood pressure.

This is a promising remedy, proceeding along somewhat novel lines, and is certainly worthy of careful clinical investigation. It is marketed by Morgenstern & Co., 24 Cliff St., New York City.

TREATING A COLD

Claude Bernard found that on paralyzing the skin and the kidneys in animals a typical fever came on, ending in death. A cold should be treated by the use of laxative salines, fresh water in abundance, fresh air, active exercise, sponge-baths, dry rubbing, everything that brings the blood to the surface; and against the fever, the sedatives such as aconitine, veratrine, digitalin, codeine, caffeine, atropine, hyoscyamine, ac-

ording to the symptoms—cough, headache, spasm, insomnia, etc.

Burggraave took cold—voice hoarse, constriction of throat, urine red and scanty, fever, with irregular accesses of cold and heat, head burning, heavy, suborbital headache; near evening marked increase and general lassitude. He took one granule each of aconitine, veratrine, digitalin, narceine and caffeine. The aconitine and veratrine soon caused slight nausea or antiperistalsis of the esophagus and pharynx, stopping at the throat; digitalin only showed its effects next morning in diuresis and vesical pressure; narceine and caffeine produced a calm night and dissipated the headache. In the morning he was perfectly well, the cold having disappeared completely.

Lemarchand, going into a damp cellar on a very hot day, felt himself catching cold, his tonsils swelling. He at once took a granule of strychnine arsenate, and in 15 minutes one of phosphoric acid. Two hours later he was perfectly well.

A CASE OF INDIGESTION

A boy of fourteen suffered for fifteen months from intense migraines, coming at evening and inducing heavy sleep, waking with nausea, vomiting twenty-four to forty-eight hours, with several days' intermission, not of equal duration; the crises were coming more frequently and lasted longer. The child was very feeble and susceptible to cold.

Brucine, hyoscyamine and quassin, three granules each, were given at each meal, with an exclusive milk diet. At the end of eight days the child was so much improved that he was allowed free diet, and the doses reduced to two granules of each. No further trouble was experienced.—*Beugnies Corneau.*

CALCIUM PHOSPHATE IN RICKETS

Droixhe says that while codliver oil does good for those who can take it, it is not a specific. Calcium phosphate seems more worthy of this title. Piorry urged it warmly, giving 5.0 to 10.0 Grams daily. Burg-

græve employed it in the form of eggshells, dried and powdered. Droxhe employed a wine containing this salt, with iron arsenate and strychnine hypophosphite. DeGoes gave calcium phosphate in granules, with charcoal if acidity was present. Salt is a necessity, sugar very injurious.

TUBERCULOSIS IN INFANTS

Dr. Barbier calls attention, in the *Gazette des Hopitaux*, to the frequency with which tuberculosis occurs in nurslings, and which is far greater than is generally admitted. He found that during the first year of life tuberculosis was the cause of death in from 20 to 30 of 100 deaths in children up to one year old. In these small patients the disease may simulate simple inanition, and is often therefore overlooked, especially in the subacute forms. The acute form of tuberculosis in infants may occur as a bacilemia, as acute miliary meningitis, or bronchopneumonia. Aside from syphilis, tuberculosis is one of the most important causes of infant mortality.

CREOSOTE IN PULMONARY TUBERCULOSIS

Dr. Beverley Robinson, New York (*Medical Record*, Nov. 20, 1909), again insists upon the importance of creosote, used internally and by inhalation, in pulmonary tuberculosis, claiming that we have absolutely no medical treatment at all equal to the creosote treatment in that disease. Dr. Robinson apparently does not approve of sanatoria, since only a comparatively small number of consumptives can be benefited by these, and maintains that by the treatment advocated by him many patients can be saved who otherwise would die.

We do not wish to claim that creosote is valueless in pulmonary tuberculosis, or for that matter in any disease requiring antiseptic treatment, but we must assert that this drug is not a sufficiently efficient antiseptic to antagonize the tubercle bacillus and that the results obtained with it in the large clinics abroad and this country have not

demonstrated any great superiority over other means of treatment. True, we have no strictly medical treatment for this malady, as little as we have any for most diseases, but we possess abundant means to treat the patients, and thus incidentally to influence their diseases.

The question concerning the merits and demerits of sanatorium treatment of pulmonary consumption is still *sub judice*, but enough has been accomplished in the last twenty years to demonstrate the enormous value of sanatoria not only for the individual patients but for those coming in contact with them after their discharge, through the education and training in matters hygienic, which patients receive in the institutions. The question is a large one and must be discussed some other time at greater length.

AN OBSERVATION ON PELLAGRA

In *The Medical World* for January, J. W. Torbett records an exceedingly important observation on pellagra. He treated four cases. These showed very offensive stools melancholy and diarrhea. When the bowels were checked the patient was worse, with nervous symptoms. He employed the sulphocarbolates of sodium and zinc, with the Morton-wave static current and direct sparks. Two were very advanced cases and he only had them under treatment for a week. Both died. One of the others died in the asylum, with acute mania. The fourth case recovered. We would suggest that if to this treatment were added that by laxatives and colonic flushing with antiseptic solutions, it is possible that the effective treatment of this malady may be developed. If so, Dr. Torbett deserves the credit for having first called attention to it.

STUFFY COLDS

Iodized calcium is a sovereign remedy. One grain every hour until free secretion occurs. Then lengthen the interval controlling the secretion by atropine.—*Post. Medical Summary*.

SURGICAL AND GYNECOLOGICAL NOTES

BY EMORY LANPHEAR, M. D., LL. D.

WANDERING KIDNEY IN WOMEN

Every patient complaining of pelvic symptoms, especially backache and nervousness, should be examined for displaced kidney. If more kidneys were replaced and less pelvic operations done fewer women would be chronic complainers. The condition is a common one; any kidney below the level of the umbilicus is a source of great mischief (even though the patient may not know of its presence); it may be retained in nearly its proper place by an easy and safe operation; and in a few months great relief will follow fixation. Great care must be exercised not to mistake Glenard's disease (of which displacement of the kidney is a prominent symptom) for simple wandering kidney, a mistake often made.

TUMORS OF THE BREAST

It is indeed strange, in view of the fact that 85 percent of all tumors in the breasts of women have been found to be malignant from the beginning and that of the remainder 15 percent at least a half become cancerous if left alone, that the "family doctor" still advises women to "wait and see what it will do." Especially is it fearful because early removal of cancer of the breast gives 85 percent cures and only 15 percent recurrence; whereas, by late operations only 25 percent can be cured.

Every doctor ought to know these things. Yet thousands there are who jeopard the lives of their patients by "hoping" the tumor may prove to be one of the insignificant 15-percent made up of cysts, fibroadenomata, mastitis, etc., instead of the fatal 85 percent, and this in the face of the fact that operation is painless, is safe and is curative.

That any kind of a doctor will permit a patient with a tumor (not an ulcerating one) to apply "pastes" or use the x-ray instead of

urging operation shows there are moral cowards in our profession, or worse; men who will deliberately treat such a case for the money to be obtained thereby instead of sending the patient to a competent surgeon instantly upon discovery of a suspicious growth. The story of lives thus sacrificed to ignorance or cupidity has never been told; nor can it be, for the details are too nerve-wrecking even for stoics of our profession.

NOCTURNAL EMISSIONS

According to Koenig of Karlsbad three to four Cc. (forty to sixty drops) of fluid extract of hydrastis taken at bedtime will control nocturnal emissions to a marked extent. If they are occurring every night the hydrastis will quickly reduce them to about once a week. If after this tablets of styptol (phthalate of cotarnine) be given for a month at bedtime the irritability will be permanently relieved. The styptol is to be ordered in tablets of one grain, of which one, two or three may be taken as required.

PROTARGOL IN GONORRHEA

Many genitourinary surgeons now prefer protargol to any other agent in the treatment of acute gonorrhea limited to the anterior urethra. The proper method is to irrigate the anterior canal (only) with 300 Cc. of a 1-2 percent solution three times a week. At the same time the patients are instructed to inject 8 Cc. of a 1-2 percent solution four times daily, preceding the injection by urination and holding the solution in the canal for ten minutes. The usual dietary restrictions are to be enforced, and no instruments are to be passed into the canal.

After about four weeks, if the process has not subsided, the Kallman anterior irrigating dilator is employed, with 300 to 450 Cc.

of a 1-3 to 1-2 percent protargol solution. Should the gonococci persist in spite of this treatment, the urethra must be examined with the endoscope and infected glands or lacunæ slit open or destroyed by means of electrolysis. When the posterior urethra also is involved, irrigation of the bladder by the Valentine method is to be employed, with massage of prostate and seminal vesicles through the rectum, followed by another vesical washing with a one-half percent solution.

QUININE FOR LOCAL ANESTHESIA

A local anesthesia as perfect as that obtainable from cocaine, yet possessing the advantages of perfect safety and continuance of effect for 2 or 3 hours may be obtained by the hypodermic injection of the "double salt" of quinine and urea hydrochloride. The only disadvantage is that in strong solution it produces marked thickening and hardening of the tissues into which it is injected, thus interfering in some cases with speedy and perfect union; but this may be overcome by limiting the strength of the solution to one-fourth of one percent, which, however, sometimes fails to give perfect anesthesia. For cases in which delayed union is not objectionable (such as for opening appendical abscesses, cholecystostomies, tonsilectomies, fistula of anus, and operation for empyema, etc.) stronger solutions may be employed with perfect satisfaction. The fibrinous exudate may persist for weeks but is gradually and wholly absorbed in time.

THIOSINAMIN FOR SCARS

By the injection of thiosinamin into cicatricial tissue the fibrous element may sometimes be softened and the stricture or deformity be much lessened. This substance, known as allyl-sulphourea, is insoluble in water but readily makes a 15-percent solution in alcohol. Its use is quite painful. There is, however, a patented derivative obtainable: two molecules of thiosinamin combined with one of sodium salicylate, called fibrolysin, which is easily

soluble in water and this causes no pain when introduced into the tissues. Injections of a 15 percent solution are given directly into the fibrous tissue which is to be softened, once in every two weeks if there is great reaction, once or twice a week if the reaction is slight.

After these injections red scars (such as that of a recent burn) become paler, swelled and somewhat flexible, with freer movement over underlying tissues, and if the injections be repeated several times these results become permanent. Microscopic examination shows first a turgescence of the individual tissue-fibers, their outline becoming blurred and indistinct, the nuclei pushed aside and becoming prominent—the whole mass appearing swollen and loose in texture. Fibrolysin is said to exert its action on pathogenic fibrous tissue alone. Recent writers, however, warn against its use where laparotomy scars exist, lest hernia result due to softening of the abdominal scar.

DOES GONORRHEA PROTECT?

The Journal of the American Medical Association contains a note to the effect that Calabrese feels sure that one who has had gonorrhea does not contract syphilis—his idea being that the toxins of the gonococcus cause such tissue changes that the spirochæta pallida cannot thrive in them. Inasmuch as where syphilis has killed its thousands, gonorrhea has slain its tens of thousands, there will probably be few doctors who will advise prophylactic clap. However, Calabrese probably intends to secure immunization to syphilis by the use of some sort of serum derived from Neisser's coccus artificially cultivated.

MYOMATA AND PREGNANCY

Myoma of the uterus complicates 7 cases in every 10,000 labors, occurring especially in primiparae of middle age. In about sixty percent of all cases delivery is spontaneous, with more than the usual tendency to postpartum hemorrhage, and with an unusually high percentage of placenta prævia.

The apparently rapid growth of the tumor during pregnancy generally depends upon edema and change of form rather than upon an actual permanent increase in size. As to treatment: When the tumor lies well above the internal os it may gradually rise out of the pelvis and thus not interfere with delivery, and even deep-seated growths may become displaced. Every patient with myoma of the uterus, however, should be placed in the hospital before delivery, because cesarean section may be imperative, forceps-delivery being just as dangerous as abdominal section even in skilled hands. Often the Porro operation is preferable to the cesarean, the child being delivered from the uterus before the great vessels are ligated.

DISINFECTION OF THE VAGINA

Few gynecologists secure even a moderate degree of cleanness of the vagina in their operative work—chiefly through incomplete work on the part of nurses. Every operation of magnitude should be preceded by thorough scrubbing with soft soap and hot water with a long thin brush which will reach every part of the canal. The mucous membrane should next be dried with gauze, a bivalve speculum being introduced to smooth out the wrinkles and bring the cervix well into view, and then all surfaces are carefully painted with tincture of iodine, the speculum being gradually turned and withdrawn. Finally the vagina should be filled with 65-percent alcohol and then rinsed with a 1 in 2000 bichloride solution.

COMBINED ANESTHESIA

At the recent International Medical Congress, held at Budapest, Prof. Kroenig of Freiberg declared: "It is only by making the use of combinations of anesthetics general that the dangers of anesthesia by inhalation can be reduced to a minimum." This is exactly what advocates of the hyoscine-morphine-cactin combination have been claiming of late—that by two doses of this agent

(one given three hours and the other one-half hour before operation) with a few drops of chloroform at the beginning of the work there can be obtained the nearest possible approach to ideal anesthesia. Now that the correctness of the assertion has been vouched for by a German professor, possibly some American "great surgeons" will "sit up and take notice."

TINCTURE OF WHITE SOAP

F. P. Dunnington, Professor of Analytical Chemistry, University of Virginia, in *The Oklahoma Medical News-Journal* for December, 1909, objects to green, or soft, soap for washing up in preparing for operation, as it carries much free alkali which tends to roughen the skin; it has a disagreeable odor; it clings to the skin and cannot be so completely removed that no odor is left. He suggests as a better and cheaper substitute the following:

White soap (Conti's).....	Gm. 300
Stronger ammonia.....	Cc. 25
Alcohol	Cc. 350
Distilled water.....	Cc. 325

OPERATIVE EPILOITIS

After abdominal operations inflammatory masses, erroneously called tumors, may form in the omentum. These usually occur when a part of the omentum has been cut away and are of inflammatory origin. As a rule they do not cause enough trouble to demand secondary abdominal section, but gradually disappear without suppuration. When exposed they are found as solid masses of firm consistence, with smooth or slightly nodular surfaces. Generally the omental inflammation is localized and hence the infected mass may be removed readily, even when its center is filled with pus, as is most likely to be the case when the epiploitis follows operation for pelvic abscess. Non-operative treatment consists of rest in bed, purgation, and local applications of mercurial ointments or kaolin and glycerin. Pain is never prominent.



Colchicum: When Should It Be Given in Gout?

Translated from An Article by Dr. Constant

By E. M. EPSTEIN, A. M., M. D.

THIS question though apparently simple is nevertheless the subject of much discussion. Those who regard the rapid suppression of the patient's pain as the most important indication, and who, moreover, see no danger in this practice, prescribe colchicum at once (Lécorché), but the great majority, with Bouchard, Dieulafoy and Legendre among them, "consider an acute attack of gout [to use the expression in the recent article on gout, "*Des Maladies de la Nutrition*," Richardière et Sicard, 1907] as a kind of emunctory which is to be respected, and they do not give colchicum before the crisis of relaxation (*deyant critique*) had taken place, which is about the fifth or sixth day."

It is clear enough that the great preoccupation of the physician's mind, in the presence of an attack of acute gout, ought not to be not only the relief of pain, but the well-considered care to safeguard the urinary depuration and the functions of the kidneys in all their integrity.

Now then, if this be the fear, that these functions should be compromised, let me demonstrate that this is an unjustified fear, and that colchicum as well as its alkaloid colchicine does not harm the renal gland at all.

First. Does colchicine modify in any way the excretion of uric acid? No! I could cite a hundred analyses in support of my affirmation, which were made in the course of acute attacks of gout where the patients were under the action of colchicine;

but as this number would extend this communication to an inordinate length it will suffice to report the analyses of the urine here following, taken the last season in the case of a patient with gout who had taken the night before and also on the next day three granules of colchicine of one milligram each.

Analysis: Urine turbid, consistency thick, color deep-yellow. Odor, *sui generis*. Reaction, acid. Density, 1024. Sediments: abundance of urate of sodium together with some fine brick-red gravel. Uric acid, 1.218 Gram per liter (about fifteen grains to the quart). Urea, 23.69 Gram per liter (about 345 grains to the quart). No albumin. No sugar.

From this analysis it is easily seen that there is no trouble in the eliminative function of the kidneys, since the free uric acid rises here to 1.218 Grams per liter without counting the abundant sediment in the urate debris. On the other hand we see that the quantity of uric acid and of urea and the density (specific gravity) here agree well with what has been many times ascertained by many authors to be the case where colchicum was not employed. Therefore we say that colchicine does not stop the secretion of uric acid.

Second. Does colchicine act unfavorably upon the functions of the kidneys? No!

During an acute attack of gout the quantity of urine generally goes down below the normal, and at times to 1200, 1000 and 800

cubic centimeters (about 300, 250 and 200 drams) in twenty-four hours, while the density increases with the increase of urinary discharge.

Colchicine does not modify in the least the quantity of urine. I have always found a decrease of urine chargeable to the attack of gout itself, oscillating between 1200 and 900 cubic centimeters (about 300 and 225 drams) and very rarely coming down below the last number. Moreover, I never found that colchicine provoked albuminuria.

In a patient, therefore, whose kidneys are in good condition we need not hesitate to give colchicine, even at the beginning of the attack. It is needless to let the patient suffer, from the prolongation of which suffering he will get no benefit, either to help the diathesis itself or for preventing its further development.

I should add, also, that the expectant treatment may be dangerous at times, because when the attack is not checked it may strike some essential organ, as for instance the heart, kidneys, etc.

Moreover, the expectant treatment is impossible in our watering places. In the clear days of summer the patients soon become impatient at their state of isolation, in spite of their comfortable hotels; already exasperated at their pains they are horrified at the possibility of having to be confined for many long weeks. Moreover, he wants to make the cure quickly, for time is limited and business is pressing and he must get out of the painful situation at any cost and as soon as possible.

It is, therefore, for the essential reasons stated above, that I do not hesitate to prescribe colchicine as soon as the attack has declared itself, provided the kidneys are undamaged. I generally begin with three granules (half milligram each) in the morning during two days, very rarely four granules, which I consider as a very high dose, provocative of accentuated digestive troubles. Milk diet. All other treatment is stopped.

One or two days following, judging by the appearance and character of the stools, by the pain the patient is experiencing, by the appearance of the disease, whether spread-

ing or not, I reduce the dose to two granules a day. When the end of the attack becomes apparent by the usual signs, such as the decrease of the edema and the redness, disappearance of pain, urine clearer and more abundant, I reduce the colchicine to one granule a day for two or three days—longer if necessary to prevent a return of the trouble. At the same time I have the patient take again the Vittel water in more abundant quantities, say 800 to 1000 Grams (24 to 32 ounces), in the morning, a quantity which I have very much reduced at the beginning of the attack so as not to increase the arterial tension at the seat of the disease.

["Vittel is in the Vosges. The springs there contain bicarbonates and sulphates of calcium and magnesium and chlorides of sodium and magnesium. The temperature of the water is 11.2°C. (about 52°F.). Altitude 336 meters. The waters are prescribed for urinary gravel, gout and biliary lithiasis. The waters are marketed."—Translated from the 1907 edition of Littré and Gilbert's "Dictionnaire de Médecine."—THE GLEANER.]

Proceeding in this way I have never met with any accident or vexation.

In other periods of gout, when the elimination of uric acid is less abundant, colchicine ought also to be prescribed from the very beginning of the attack, for while in the longer or shorter intercalary period between an acute attack of gout and the chronic phase of it, which may be called subacute, the quantity of the uric acid excreted reaches at times from eighty to ninety centigrams per liter at the maximum, it never exceeds from fifty-five to sixty centigrams per liter in chronic gout.

It is therefore not alone the elimination of the uric acid which is to be considered by the physician during a period when the gouty diathesis has more advanced, but he must think of the evil action (*retentissement facheux*) which this diathesis may yet have upon the viscera. For it must not be forgotten that the gouty person dies of trouble with his heart or his kidneys, and it is this final fatal term which should be retarded as long as possible, by preserving the organs

against the greater or less violent assaults of gout, repeated or prolonged.

In all this discussion I have had in view only the serious attack of this diathesis. Attacks of less importance, above all those of chronic gout, will do very well under a medication less active but sufficient, such as sodium salicylate, aspirin, etc. For while colchicine renders great services in the pressing and menacing cases it is at the same time a very toxic substance which must not be abused, but used with circumspection and prudence.

Finally, aside from the reservation pointed out at the beginning of this article, so far as the integrity of the kidneys are concerned I wish to add that cardiac or circulation manifestations are not express contraindications against the use of colchicine but in such cases there is need of much caution, close watching and very small doses.

Colchicum can and ought to be given at the beginning of the attack.

I can not speak out too emphatically against the unfortunately too frequent use of the hypodermatic injection of morphine in an attack of gout. This practice ought to be banished forever from therapeutics, since in paralyzing the renal functions morphine not only arrests the elimination of the uric-acid detritus but the patient becomes exposed to severe outbreaks, preparing the way for a rapid attack of the grave forms of gout and above all for the formation of those tophi which abound in and deform a certain class of gouty persons.

[The above article, written by Dr. Constant of Vittel, France, is from the *Revue medicale de l'Est*, published with the author's permission in the *Journal de Médecine de Paris*, of September 25, 1909, and is here translated from the *Revue Therapeutique des Alcaloides* for November, 1909.—THE GLEANER.]

STRYCHNINE VS. BRUCINE

Drs. Dixon and Harvey find (British Pharmaceutical Conference, 1908) by experiments that brucine is about one-eighth as toxic as strychnine, but that the two alkaloids have very different actions. Strych-

nine acts on the sensory cells of the spinal cord and causes death by asphyxia, the muscles of the chest being locked in convulsions. Brucine causes slight convulsions at first, but this effect passes off quickly and the alkaloid acts then as a narcotic, paralyzing the motor nerves. Brucine resembles curare and conium in its action.—*Medico-Surgical Journal*, Calcutta, 1909.

ONIONS IN PNEUMONIA

Hot onions, according to a French physician, are said to be a "sure cure" for pneumonia. The remedy is as follows: Take six or ten onions, according to size, chop fine, put in a large pan over a fire, then add the same quantity of rye-meal, and vinegar enough to make a thick paste. In the meantime stir thoroughly, letting the mixture simmer for five or ten minutes. Then put it in a cotton bag large enough to cover the lungs and apply to the chest of the patient, as hot as he can bear it. In about ten minutes apply another poultice and continue to repeat. In a few hours the patient is out of danger. This simple remedy has never failed to cure this so-often fatal malady. Usually three or four applications will be sufficient.—*Medico-Surgical Journal*, Calcutta, 1909, p. 8.

TWO CASES OF CURE WITH THIOSINAMIN

Dr. Lavarant says in the *Journal des Sciences Medicales de Lille*, March, 1909, that after having learned the formula and the physiologic effects of thiosinamin he had, in association with Lermoyez, a case of edema of the glottis together with a contracted larynx which was cured with injections of thiosinamin. He also recalls the case of Teleky, that of a young man who suffered from a gastric cicatrix which was ruptured by thiosinamin.

He also reports a case of synotensis of the left knee cured with thiosinamin, and a case of cicatricial contraction of the larynx of syphilitic origin which was tracheotomized, dilated, and then after injection of thiosina-

min was cured. With the mirror one can see plainly the swelling in the larynx the next day after the injection of the thiosinamin.—Dr. Sagnon, in *La Province Medicale*, 1909.

APROPOS OF APIOL

The new French Codex recognizes officially the crystal apiol, obtained from the seed of parsley. This specification is absolutely regrettable for both French cultivation and industry, for it has been known for a long time that the essence of French parsley contains but a small quantity of this body, and that that parsley is made up on the average of myristicene, which does not differ chemically from apiol except by one methoxyl group, OCH_3 , whose pharmacodynamic action is sensibly analogous. The fatal consequence of this fact is not sufficiently attended to. We have become tributary for this product to Germany. The price of crystallized apiol has been increased and there is a lack of it, even in the Paris market. As a consequence capsules of apiol are manufactured from parsley butter, which presents a crystalline aspect, due to the presence of apein, which is a glucoside of parsley, and these capsules have occasioned grave accidents.—Chevalier, in *La Medicine Orientale*, 1909.

SIDE-ACTIONS OF NEW REMEDIES

(Continued)

Mesotan.—There was noticed irritation of the skin in the form of inflammation. The severe burning and itching often resulting can be avoided by rubbing it in cautiously, and especially by mixing the remedy with vaseline. If mesotan and mesotan-vaseline are kept for a long time decomposition products may result and give rise to various forms of skin irritation.

Phenacetin.—Very seldom have poisonous effects appeared from this remedy, but such as have were exanthemata, hemoglobinuria, hemorrhagic nephritis, dizziness, cyanosis, and sometimes ulcerations on the lower extremities.

Phenocoll Hydrochloride.—At times there results nausea and vomiting. For children this remedy should be very cautiously used on account of danger from collapse from over-dosage.

Pyramidon.—Among the side-effects of this remedy noticed were urticaria-like exanthemata, fatigue, a sense of oppression, nausea, tendency to vomit, vomiting, loss of appetite, strong sweats, cyanosis, cadaverous appearance, small pulse; in one instance death in collapse occurred. The urine sometimes is colored red from dimethyl-amidoantipyrin.

Rheumasol.—This produces moderate local irritation-phenomena and desquamation, hence must not be used on tender, hyperesthetic skins.

Rheumatin.—At times this occasions tinnitus aurium and it has produced deafness, though rarely.

Salimenthol.—Eructations at times occur when administered internally.

Salipyrin.—Side-effects of this are: perioritis of the scapula, due to the irritation of the vasodilator nervous system, also exanthemata, burning in the stomach (heart-burn), dulness of hearing, tinnitus, difficulty of deglutition, thirst and dryness of the tongue.

Saloquinine.—The salicylic component of this remedy sometimes causes tinnitus aurium.

Salocresol.—The odor becomes disagreeably noticeable.

Spirosal.—The side-effects of this remedy noticed were: a feeling of burning after it was rubbed in, severe irritation of the skin with redness and painfulness; tinnitus, vertigo.

Under this group of remedies, novaspirin seems to displace the salipyrin and aspirin, especially in the treatment of influenza, while pyramidon as an antifebrile, especially in small doses, has great value in pulmonary phthisis and perhaps in typhus also. These remedies which are introduced through the skin are growing in popularity because it pleases the common people, as not disturbing digestion, to have their medicine administered externally.



Some Mistakes of the Doctors

IT has occurred to me many times, in the past two years, that the practice of medicine is undergoing a complete radical change. That the public in general is learning to depend less and less upon the doctor. That every new fad is eagerly followed by many whom we have always looked upon as intelligent. We are often pained and shocked that many of our good patients take to Christian science, osteopathy, Emmanuel movement, physical culture, Fletcherism, viavi, shoestore arch-supporters, drugstore rectal dilators, peddlers' vibrators, two-dollar electric batteries and ten-dollar electric belts, and the thousand and one advertised fakes exploited by our own newspapers as well as the slick agents who first visit the doctor and later the dear public, selling to the aforesaid dear public for forty percent less than to the doctor.

We find in the homes of our patients pretty nearly all the things we have used in our practice, and some of the things we had thought of using sometime but haven't got around to it.

We find that many of our patients whom we have been treating for rheumatism are using some form of arch-supporters, many times to our chagrin, with comfort and benefit, especially if the supporter happens to fit. We find that some of our patients we have treated for headache for years have suddenly been cured by securing properly fitting glasses, and who were put on the right track, not by the doctor, but by some friend who had found similar relief.

Some of our long-standing rectal cases that we have failed to relieve through carelessness on our part (or lack of interest) have been cured by a set of rectal dilators furnished by the druggist.

I once listened to a very interesting lecture by a celebrated lawyer on "some mistakes of Moses," and it has occurred to me that perhaps it might be of profit to us all to mention some of the mistakes of doctors.

It is a mistake to give medicine for the relief of headache without impressing the fact upon the patient that a headache is only a symptom, that it is probably curable, and that with his cooperation you can almost certainly cure it. Probably more than fifty percent of the headaches are due to eye-strain, many are due to constipation, indigestion, and to faulty metabolism.

It is a mistake to allow a patient suffering from rheumatism of the lower extremities to go without a thorough examination of the feet, especially the arches. It is a mistake to treat all cases of chronic constipation without an examination of the rectum for a tight sphincter, hemorrhoids or other rectal disease that may be a causative factor.

It is a mistake to laugh at the so-called "growing pains" of children, for they are nearly always rheumatic.

It is a mistake to advise whipping a child for bed-wetting, for it may be due to some irritation of the rectum or bladder, or an abnormal prepuce which needs dilating or removal.

It is a mistake to tell a woman that the small growth in the breast she shows you is only an enlarged gland, in six months it may be too late to save the woman's life by an operation for cancer.

It is a mistake to allow your medical journals or books to remain on the waiting-room table.

It is a mistake to give a patient a prescription for anything for the relief of pain—with all due respect for the pharmacist.

I don't believe we all pay attention enough to our chronic cases. We lose interest in many cases that we might profitably study up, profitably both to the patient and to ourselves.

Every patient that goes to the doctor believes he is ill. They may make light of it at the time, but if they were not a little worried or annoyed they would not come, so it is up to us to do something for them, something they will appreciate. It is our duty to keep them away from the charlatan and the quack, whether their ailments are fancied or real.

I must admit that the average patient wants medicine, and feels cheated if we do not give it. But isn't it possible for us, with our superior knowledge and judgment, gradually to educate our patients so that in time they will appreciate that our advice, after all, in very many cases, is much better than drugs—that advice regarding hygiene, proper habits as to eating and sleeping, the immense importance of fresh air at all times. What to you may seem trivial, may appear very much magnified to a nervous patient. I am speaking from my own experience.

All these mistakes I have made and many more. It is up to the doctor to keep pace with the times. Many patients drift into the habit of following the fads in medicine because their physician does not appear to take the interest in their case that they feel entitled to.

LEROY A. NEWTON.

Greenfield, Mass.

BRYONIN

The once popular, well-tried remedy of the old school, *bryonia alba* (*bryonia dioica*),

is little remembered at the present time, other newer and perhaps less useful drugs holding the attention of the fickle medical profession. The new attracts, we shelve the old-fashioned homely remedies of our forefathers with the old-fashioned ideas of treatment, forgetting the good they did with the crude implements at their command, in our haste to accept the latest dicta of science.

Bryonia was one of their good things and within its indications still deserves the well-earned esteem in which it was formerly held.

We must look to the eclectics for any light on its field of action and we find it is a remedy of great repute with them.

Its cardinal characteristics are pain, stitching, sticking, cutting pains worse on motion, wherever found; a hard vibratile pulse (*Scudder*), and cerebral irritation, manifested by delirium of the aggressive type, harping on business affairs, patient imagines he is away from home, is anxious to return and is restless and hard to control.

With these indications, *bryonia* acts wonderfully well and speedily. It is only necessary to have a dependable preparation to obtain very decided results. On account of the usual instability of the galenic preparations the glucoside *bryonin* is to be preferred. It is colorless, bitter, soluble in water and alcohol, and may be dispensed in solution if preferred, or in the granule form containing 1 milligram. In acute maladies a granule may be given every fifteen minutes until relief or until its physiological action is obtained—irritation of stomach, with looseness of bowels.

Bryonin has a great field of action in lung maladies with the accompanying indications enumerated above. The sharp, cutting pain, with short, sharp cough, and worse on motion, pulse hard, frequent, vibratile, high fever, mental disturbance.

In pleurisy during the acute stage, with the sharp, cutting pain, it is very effective, and no less so during the stage of effusion and for the chronic pain so often resulting, due to pleuritic adhesions. It is useful in laryngitis with sharp pains and dry rasping irritative cough; in hepatic disorders with jaundice, high-colored urine, pain of the dis-

tinctive type; in acute and chronic rheumatism; in pericarditis, gastritis, peritonitis, colics, appendicitis, congestive headache.

In the violent delirium of typhoid fever, when the patient does not realize he is at home but is struggling to reach home and worries about his business affairs, is hard to control, bryonin is one of the most potent remedies we have, and is especially active if the alimentary tract has been kept clean and empty.

I recall several cases showing the positive indications, and in all this one remedy given to effect acted most wonderfully.

An old lady taken suddenly ill at her home with a severe attack of pneumonia complained, after the acute stage had passed, of occasional sharp, cutting pains in the affected lung. The pulse remained hard and frequent; her one desire was to be taken home, where she could superintend her household affairs. All other medication was stopped, bryonin given, 1 milligram every hour, and in eighteen hours all the symptoms were removed.

A young man, married, in debt, developed pneumonia and complained bitterly of the sharp pain in his chest, of business worries, talked constantly, was hard to control, would get out of bed if left alone a moment in his desire to go home. Bryonin acted as happily in this case.

A middle-aged man of 47, never sick in his life, developed sciatica while at work in a ditch, complicated with obstipation and auto-toxemia. In the course of his disorder the symptoms indicative of bryonin arose and were met promptly by this remedy. I have given it to patients complaining of pleuritic stitch remaining after an attack of pleurisy, in rheumatism with stinging pain in the joints, in the delirium of typhoid fever, and it has acted well.

Bryonin is well worth detailed study. It is a specific remedy when given within its limitations.

R. J. SMITH.

Collinston, Utah.

ver Medical Times, from the Utah section, in which we are pleased to see Dr. Smith's name recorded as one of the "Editorial Collaborators." By the way, Brethren of the Great West, do you know what a fine journal Stimson is getting out? Better send for a copy, or better still, send a dollar for a whole year's subscription.—ED.]

AN ANSWER TO DR. E. GARD EDWARDS ON "THE PAYMENT OF COMMISSIONS"

In reading the article in the November issue (p. 1185), "The Payment of Commissions," by Dr. Edwards, I was surprised at his statement that the subject was very little discussed by the profession; and then, again, I could not blame anyone for avoiding the subject, as its discussion would not alter matters but would only open the "stink-pot" and emit more of its disagreeable odors; but if Dr. Edwards will look through *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* of about two years ago he will find the subject very freely agitated or discussed, with the physicians equally divided as to whether it is right or wrong to accept a commission or division of the fee. Personally I see no objection to accepting a fee from the surgeon if it is an honorable one, paid out of his legal fee charged for his services, this being a personal matter between himself and his colleagues.

In the above case I cannot see any difference between a commission by the physician or a commission in a commercial line, for if the patient had not been referred to him by the party of the first part he would not have had the patient under his advice and care; and as to the statement that most of the physicians send their patients to the one who gives the larger fee-division, this is absolutely unbelievable, for I can not conceive that any physician, unless he be a miserable, heartless scamp, would stoop so low and would think so little of the welfare of his patient as to sacrifice him or her into incompetent hands, for he knows that if the patient is successfully operated upon and recovers it will be to his own advantage, and if to the contrary, will be more or less of a

[We clip this article from the November number of that excellent journal, *The Den-*

detriment to him, as unsuccessful treatment does not bring business.

From personal knowledge I can say that it is not the party of the first part that is seeking a division of the fee, but it is the party of the second part that makes the proposition, in the majority of cases, so as to get the doctor to send patients to him for special or surgical treatment; and with all kinds of competition on hand it is really a hard lot for many physicians to make both ends meet. Verily, one-half of the profession do not know how the other half live.

I will say this: until every physician in the world is so competent as to do all his own work, both medical and surgical, so that he need not seek for one who is more competent than himself, so long will the fee division go on; and so long as the hand of fellowship is denied to the medical practitioners of all schools, such as the regulars, homeopaths and eclectics, not forgetting the alkaloidists, so as to unite for the common good of all concerned; and so long as hospitals and free dispensaries treat the larger number of patients who can well afford to pay free of charge; and so long as the hospitals are controlled by a certain few, especially the municipal hospitals that are controlled by the political party in power, and the members of the staff of these are appointed irrespective of ability and worth, provided he is a good politician and vote-getter himself; and so long as a large number of physicians on hospital staffs are on the pay-roll of the large corporations of the land, to intimidate people hurt in their employ into signing a quit-claim or release for a small amount of money while they are in agony and unable to understand the nature of the paper they are signing (which I can prove); so long as members of the profession will contradict each other upon the witness stand, whether they are right or wrong, and wilfully tell falsehoods for the sake of the money involved, and especially when an expert on insanity will knowingly make false statements upon the witness stand and claim a person to be insane when he knows he is not insane (this I can also prove); and so long as the hospitals do not open up an

operating room and beds so that the physicians not on the staff may bring their patients and operate upon them themselves if they are competent to do so (and I know that there are many physicians not connected with any hospital that are far more able to do surgical work than those on the staff of some hospitals),—just so long as all these things are not remedied will the division of fees go on.

Therefore, my brothers, let us stop finding fault with our colleagues for accepting and giving commissions and try to make conditions better by uniting all schools of medicine and fight hand in hand for the good of all concerned.

Let us endeavor

1. To get the trustees of the hospitals, especially city hospitals, to open up an operating room so that all who desire may take their patients there and do their own operations if they are competent to do them, the hospital only to charge the actual cost of material for the use of the operating room and to charge a fair price for room or bed in which the patient is placed, including fees for nurses according to the number required and the ability of the patient to pay.

2. To regulate free medical and surgical treatment to the poor who can furnish evidence of their inability to pay, thus forcing those able to pay to seek advice from a regularly practising physician, bringing the fee to him who is entitled to it.

3. Let us fight the common enemy, the quack charlatan, therapeutic nihilist and others who are degrading our noble profession.

4. Let us all unite and make one great fight in conjunction with all the medical associations of the land to get an act passed by Congress for a federal examination board so that when you hold a federal certificate you may practise anywhere in the United States, thus abolishing the state boards of examiners.

5. Let us see to it that all those practising midwifery are regular licensed physicians, thereby doing away with the midwives, most of whom being illiterate and many filthy, dirty and incompetent, doing

much damage and bringing misery to many mothers, such as septicemia, ruptured perineum and uterus, not counting the many other ills due to their incompetence, and, above all, taking the fee which belongs to the graduated physician, thereby depriving him of his just dues and robbing him of a living and the necessary means of educating and bringing up his family.

Yes, my dear brothers, these are the things we must strive for. Only then will it be possible to do away with fee-splitting when the doctor is able to make a living, as then the thousands of patients who now are treated free will be compelled to seek advice for which they must pay. Even then, if a surgical patient is referred to a specialist, it would be far better for that specialist to have the doctor who referred the case assist him in the operation and pay him accordingly, and if necessary have him look after the patient in conjunction with himself.

6. See to it that all physicians unite against all cheap lodge-work, especially the sick-benefit organizations where the physician gets from 50 cents to \$1.00 per year for each member for medical attendance, oftentimes for the whole family. This practice is degrading the profession and in these days of unions we should also unite against this evil. No physician who accepts this kind of work can and will do justice, the consequence being that there will be dissatisfaction in the association against the doctor and he will lose the confidence of the members, who split into factions, a few being with him, many against him, the result being a few friends and many enemies; all this sure to react to his own disadvantage. It is true that a few hundred a year is nice money for a young beginner, but it never pays in the end—take this from me. I had many lodges in my younger days, but have always regretted ever having had anything to do with them, as it only degrades one in the eyes of the better class of people and is by no means dignifying.

7. Last, but not least, let us speak well of each other and uphold each other whenever and wherever we can. Let us not speak evil of our brother physician. If you cannot

speak well of him say nothing, for no one takes more notice of such than the layman, and if the physician happens to be his friend it will surely react upon yourself, for there is no one, no matter how weak his reputation, who has not his friends. Therefore speak about others as you would have them speak about you—and here I will say that there never was anything more true than the old German proverb:

*Reden ist silber,
Schweigen ist gold,*

which is to say, "speech is silver, but silence is gold."

W. F. RADUE.

Union Hill, N. J.

A FATAL CASE OF ACUTE POISONING BY OIL OF WINTERGREEN

The subject of this accident was a boy two years of age. The child was considered to be delicate, but there was no history of illness. The father is of marked nervous temperament; family history otherwise negative. Securing an ounce-bottle, about three-quarters full, of oil of wintergreen, the child drank some—amount difficult to estimate, but about 1-2 ounce was taken from the bottle, and some of this being spilled on table, clothes, hands and face. He complained of pain in mouth and eyes (the latter were rubbed with the fingers). His stomach evacuated in about fifteen minutes. Was given milk and white of egg. In an hour he was easy, played as usual, then went to bed. He slept until 10 o'clock, when, waking up, he asked for drink, which request was repeated more or less continuously for two hours.

I saw the child at this time. No evidence of poisoning, except quickened and deepened respiration of 40 per minute; lips and tongue showed blistering and corrosive irritation; free urination; voluntary bowel movement showed no signs of the oil; temperature and heart action normal. I gave hyoscyamine, 1-125 grain, divided into 10 doses, one dose every fifteen minutes, to quiet the nervous condition, which however was not marked.

At 2 a. m. I found him in marked tonic spasm; temperature 95° F.; respiration 50; marked dilation of pupils; fixed, staring eyes; delirium; total loss of consciousness. When immersed in a hot bath, the spasm relaxed. A high enema gave a large evacuation with wintergreen odor. There was free urination, but no odor nor change in color. Heart very rapid, could not be counted, weak, and showed marked irritation. I gave sparteine, 1-2 grain, hypodermically, which steadied and slowed the heart for about fifteen minutes, but the effect soon wore off and a second spasm developed, this being followed by a third and fourth spasm, ending in death at 3:20 a. m., ten hours after swallowing the wintergreen oil. Rigor mortis was very marked a few minutes after death. Cheeks, lips and tongue appeared as if burned by phenol. Autopsy was not permitted.

The remnant of the oil of wintergreen gave a marked odor of methyl- (wood-) alcohol. It was purchased some three years ago and suggests adulteration of the oil with methyl-alcohol, or else deterioration of the oil in that period. Of the half ounce of oil removed from the bottle the amount swallowed can not be estimated.

From the very limited references at my command, I can not find records of similar, fatal or even toxic, cases, except one cited by Potter, in which one ounce of spirit of gaultheria caused death by violent gastritis. Reports of similar cases are solicited.

H. C. DODGE.

Steamboat Springs, Col.

A "SURE" CURE FOR INSOMNIA

Yesterday, says *Success*, a friend who had heard that I sometimes suffered from insomnia told me of a sure cure. "Eat a quart of peanuts and drink two or three glasses of milk before going to bed," said he, "and I'll warrant you'll be asleep within half an hour."

I did as he suggested, and now, for the benefit of others who may be afflicted with insomnia, I feel it to be my duty to report what happened, so far as I am able this morning to recall the details. First let me

say, my friend was right. I did go to sleep very soon after my retirement. Then a friend with his head under his arm came along and asked me if I wanted to buy his feet. I was negotiating with him, when the dragon on which I was riding slipped out of his skin and left me floating in mid-air. While I was considering how to get down, a bull with two heads peered over the edge of the well and said he would haul me up if I would first climb up and rig a windlass for him.

So, as I was sliding down the mountain-side, the brakeman came in, and I asked him when the train would reach my station. "We passed your station four hundred and fifty years ago," he said, calmly folding up the train and slipping it into his vest pocket. At this juncture the clown bounded into the ring and pulled the center pole out of the ground, lifting the tent and all the people in it up, while I stood on the earth below watching myself go out of sight among the clouds that floated on the ocean of time.

Then I came to and found that I had been asleep almost three and one-half minutes.

HOW TO LIVE TO BE AS OLD AS METHUSELAH

This may possibly be my last communication on medical topics, and I send it to you because you will see to it that I am accredited with its introduction. For the past forty years I have written much original matter for publication in medical journals and no credit in after-years was given me, but to others who stole my thunder.

I was the first person to write about the anesthetic properties of salt sea-water of a specific gravity of 1020 or more. A limb can be amputated while under water (sea-water) without pain. Stab wounds are not felt when made under salt water, and thousands of other uses may be made of this God-given and cheapest of all medicinal remedies. Injected hypodermically it relieves pain quickly.

The matter I am about to introduce is the toad-frog, found jumping over the fields in summer time. It is a well-proven fact that

these frogs have been known to live centuries. One was found 300 feet below the surface in a mine in Butte, Mont., the property of Charles Van Zandt. The workmen were blasting a huge fragment of rock with sledges when it fell apart and in the center it was hollow and damp, and in that center this batrachian was found. It was named "Methuselah," and lived a long while after it was taken from the rock. It might have been there more than one thousand years.

Now, what I propose is, that the common toad-frog be used as medicine. Take the eyes, brain, blood, heart of one toad, and after preparing it similarly to other animal products without heat enough to destroy its properties, mix it thoroughly with milk-sugar, 4 parts, charcoal, 1 part, and make into 1000 5-grain tablets, giving one tablet three times a day until results are obtained.

This may be used in paralysis, locomotor ataxia, organic heart disease, loss of vision from old age, baldheadedness, tuberculosis, cancer, syphilis, leprosy, etc. But the object is to make an old man young and keep him young a century. One of the first evidences of this rejuvenation will be the changing of white or gray hair to the color of youth, and the restoration of normal conditions in those physiologically dead, sexually.

J. ZACHARY TAYLOR.

Baltimore, Md.

[Dr. Taylor's suggestion is certainly novel. There are several attractive features about it. The idea is quite in line with the trend of modern medical thought, for it is just as likely that a serum from the death-defying frog would render the user immune against death as that other recently introduced sera should do what they are expected to. Hail to the "*tabellæ longæ vitæ*."]'

As to the feasibility—why not? Who has tried the frog-toad death-annihilating serum? And until tried, who can say it is worthless? Who dares to say anything is impossible, *a priori*?

Our principal objection is not against the possible or probable efficacy of the pro-

posed serum, but against its desirability. Who wants to make old men feel young? They've had their chances. If they did not embrace their opportunities, so much the worse for them.

What we need is a serum to make old men realize that they *are* old and stop trying to cavort around like a two-year-old. Let them sit in the corner and tell yarns, smoke, and enjoy to the fullest extent the luxury of freedom from responsibility and dire temptation. It's *our* turn now!—ED.]

DR. ATKINSON GOES TO ST. LOUIS

We are sorry to lose from our midst Dr. T. G. Atkinson, the brilliant editor of *The Medical Standard*, who has severed his connection with that journal and sold out his interests in *Practical Therapeutics* in order to become editor of *The Medical Brief* of St. Louis. What is the *Standard's* and Chicago's loss is certain to be to the advantage of the *Brief* and St. Louis. Time was when the *Brief* was one of the most powerful factors in the medical-journal field. It was derided by some, feared by others, but loved and admired by thousands. We look for a revival of its old-time interest under the powerful editorial guiding hand of Dr. Atkinson.

Keep your eyes on the *Brief*.

AN EPIDEMIC OF TYPHOID FEVER

During the last fifteen years of a busy country practice I have run up against many cases of typhoid fever, "the real thing," life-size, and generally came off victor. In an epidemic which I had on my hands in 1908, commencing in May and lasting till November, there were 90 cases that were confined to their beds from three to eleven weeks, and as many more that received the abortive treatment.

Through it all I had the assistance of one trained nurse in one family for two weeks. Three and four in one family would be down at a time, and in some places the sanitary conditions were very bad. For fear of contagion hired help could not be obtained

in many instances. Some member of the family would have to do all the work, nursing, cooking, etc., and you can imagine the care the sick can get from attendants that are completely worn out themselves. In one family, for instance, the wife was taking care of her husband who had hemorrhage; one boy, six years old, was wild with delirium, one girl when not under influence of opiate cried continually with pain, and another sick, and she herself six months pregnant; yet everything depended on her. They are all living and well today.

The cause of the epidemic is not known, but is supposed to be connected with the destruction of an old mill-dam that had been standing for years.

While there was not a death, all patients looked like walking skeletons when they got over it. The outcome was not only a wonder to the laity but also to the doctors in the surrounding country, and to myself it seemed miraculous.

I want to give here my plan of treatment. I will not enter into any symptomatology and pathology. Suffice it to say that the symptoms were of a plain-enough character not to leave any doubt about the nature of the disease.

While all will agree with me that in fevers nursing is half the battle, I had mostly to depend on remedies to help me out. In regard to treatment I am not going to give anything new, but just simply the plan which I followed and which always worked well in my hands. From the first I would try to impress on those in charge the great necessity of cleanliness in all respects in the care of stools, the benefit of uniform and regular bathing, etc. My first medicine would be a good dose of calomel followed by a saline laxative, kept up until I was satisfied that the inner man had had a good cleaning out. Most of the patients got a powder or capsule composed of the following remedies, in doses regulated by the age and physical condition of the patients. Antifebrin, asclepias, salol, sulphocarbolate of zinc, and in case of bad breath with a dirty coated white and brown tongue I would add the sodium sulphite. During the

febrile stage the patients received these medicines right along every two to three hours, four times a day as needed.

Also, a liquid mixture containing the following medicines with elixir of lactated pepsin as a basis: Lloyd's specific echinacea, and baptisia, to which were added the following as indicated by the symptoms: small frequent pulse: aconite; full and bounding pulse: veratrum; a red, beefy tongue: dilute muriatic acid; sleeplessness, restlessness, nervousness: passiflora; flushed face, headache, determination of blood to head: gelsemium; pain and distention in the region of liver with clay-colored stool (usually while convalescing): chionanthus; pain and fulness in the epigastrium and general stomachic distress: nux vomica. Diarrhea was usually controlled with bismuth subnitrate, camphorated tincture of opium, peppermint; hemorrhage from bowels by Dover's powder, vegetable charcoal and tannic acid.

Calomel was continued throughout treatment unless there was hemorrhage, from 1-10 to 1-2 grain being given as needed, and followed by oil or a mild laxative. The bowels were frequently flushed with warm water—local application to abdomen, consisting of camphor, oil of turpentine and lard proved grateful. I succeeded in controlling most cases of delirium with passiflora and gelsemium, but sometimes had to resort to opium, codeine, and chloral.

In children I depended largely on bathing to reduce the temperature. The bathing in grown people was "quite a proposition," as very few had anything like a bath-tub.

The preceding is a general outline of my way of handling my cases, and while it may not be very scientific it has always been successful in my hands. If it will be of the least benefit to some younger man, I shall rest satisfied. Of course other remedies were used as indicated, such as stimulants, etc. The diet consisted of milk in any form to suit the patient, broths, soft-boiled or poached eggs, beef tea. I also used a good extract of beef, wine and iron.

Now if you can glean any part out of this worth publishing, all right, and if not

put it in waste basket. And if it is not necessary to use my name you can just leave it off.

C. R. KITSMILLER.

Fresno, O.

[We do not put this sort of stuff into the waste-basket, Doctor, nor do we like to leave off the names of contributors. Honor to whom honor is due! We congratulate you on the splendid showing you made in spite of all the handicaps and difficulties. Or was it because of them? You know, weaklings are easily snowed under by adverse circumstances, but strong men are thereby stimulated to better work.]

I don't think I shall add any criticism at all. Every one has his favorite plan of medication, and it is the general management of typhoid fever that counts most. In this respect you have certainly done well. If I might add a suggestion, I should probably, in such a case, limit myself to a far smaller number of remedies. Calomel and saline laxatives; then the sulphocarbolates, throughout the course of the disease; strychnine, digitalin, hyoscyamine, monobromated camphor, as may be indicated. That would probably be all the remedies needed in the majority of cases. If hemorrhage occurs, an opiate may be indicated to secure absolute rest for the bowel, though in my experience atropine (associated with strychnine arsenate and glonoin if there be shock) does even better than the morphine. Of course there are special indications for special remedies, as you so clearly point out; and then we prefer the active principles when they are available.—ED.]

"PRACTICAL THERAPEUTICS" CHANGES HANDS

Dr. William J. Robinson, editor of *The Critic and Guide*, *The American Journal of Urology*, and *Therapeutic Medicine*, has purchased *The Chicago Clinic*, which has had an uninterrupted existence for twenty-three years (though known during the past year under the title of *Practical Therapeutics*) and has consolidated it with *Therapeutic*

Medicine. The consolidated journal will be published monthly, and it is believed that under the editorship of Dr. William J. Robinson it will become one of the strongest and most important medical publications in America. The publication office is located at 12 Mt. Morris Park W., New York.

Since this was put in type we learn that Dr. Robinson has also acquired *The Medical Review of Reviews*. Here is a strong combination. We shall look for the combined result with pleasurable anticipation.

A CASE OF HARELIP

In January last I assisted a young woman in her labor. Owing to a narrow outlet of the pelvis and inertia of uterine contractions, I had to use the forceps. The child was delivered in a semicomatose condition; it revived, however, and was found to have harelip. On investigation I learned that three cousins of the family had been born with harelip. This shows heredity, I think. In this case the child had also a cleft palate; he is still living, but is in poor condition.

FERNAND D'ORBESSAN.

Ozone Park, N. Y.

A CASE OF NEURASTHENIA; ALSO ONE OF INSOMNIA

The patient was a lady, age 39, occupation housewife, married and mother of one child 11 years old. She was first seen when in bed, and was at that time much emaciated, very nervous, despondent, and could not sleep. She refused food, wept all the time and was very weak. I learned that she was badly constipated, had no temperature other than that due to nervous irritation, while her pulse was small and rapid. The disposition was naturally gentle. At first she refused utterly to be comforted and rebelled against any form of exercise.

Treatment was "clean out, clean up and keep clean," with calomel, podophyllin and bilein, with saline laxative the following morning before the breakfast hour. Intestinal antiseptics were administered two or three times daily. A mild tonic was given

three times a day and the bowels were kept open and free by laxatives, not purgatives. Exercise was enforced, notwithstanding her rebellion against it. I had her assist around the house and take daily walks and car-rides with a nurse in charge.

I first got the confidence of the patient and was firm. I impressed upon her mind that *she was going to get well*.

Plenty of good nutritious food was ordered, of a kind to impose no tax upon the organs of digestion. To produce sleep *passiflora incarnata* was administered at bedtime. Quiet sleep and rest were the result and complete recovery followed in due course of time.

Of course the hygiene was looked after carefully and the mind of the patient was kept pleasantly occupied. I believe it is best to educate the patient out of the discomfort rather than to dose her, though a few judiciously selected medicines are indicated.

A young lady stenographer applied to me for advice and treatment for insomnia accompanied with nervousness. The cause of the disturbance was too much work without recreation, and too long hours.

She was much reduced in weight, complained of a poor appetite and a failure to sleep. I advised rest, the "*clean out, clean up and keep clean*" (Abbott), followed with sulphocarbolates, all of which I administered, as well as a mild tonic treatment.

I sent my patient to the country with the advice to rest from all kinds of mental employment, to eat sufficiently of good nutritious food, take walks daily long enough to make her feel as though a rest would be good, light cold sponge-baths mornings, and not to fail to dip her feet in cold water after her sponge-bath, drying very lightly.

In one month my patient returned, stout, healthy and with her normal weight regained. She sleeps well and can go about as if she had never been ailing.

I neglected to say that at night, half an hour before retiring, I prescribed a preparation containing veronal in small doses, repeated in one hour if sleep failed to arrive. This served every purpose and the patient

slept well every night after leaving the country for her city home.

J. E. WATSON.

Chicago, Ill.

ASTHMA AND CERVICAL BRACHIAL NEURALGIA RELIEVED WITH CROTALIN

The patient, a woman 38 years of age, has been troubled with bronchial asthma for fifteen years, more or less. I have had her under treatment for four years, during which time she has been fairly comfortable but never permanently relieved. Two years ago she developed a cervicobrachial neuralgia of the left shoulder and arm which, at times, was very severe and was broken up with hypodermic injections of hyoscine, morphine and cactin, but whenever she had an asthmatic attack the neuralgia became worse. I tried every remedy at my command without permanent success. I therefore determined to put her under treatment with crotalin, and the results are as follows:

Dec. 6, at 10 a. m., I gave her an injection of 1-100 grain of crotalin in the right side of the abdomen. I called at 6 p. m. There was quite a swelling and burning at the point of injection, no perceptible relief of the asthma or neuralgia. Dec. 7, at 10 a. m., the swelling and burning were receding and the asthma and neuralgia much better. Dec. 8, at 10 a. m., the neuralgia was completely relieved, asthma better than at any time in months, swelling and pain at point of injection almost gone. I called Dec. 9 at 10 a. m. and gave her another injection of 1-100 grain of crotalin in the left side of the abdomen. The next day I found the point very tender and swollen, and quite severe burning or smarting. The asthma was completely relieved and the cervicobrachial neuralgia all gone. She said she had not been able to breathe so easily within the last ten years; also, that about 3 p. m., after the second injection, she had a swelling of the tip of her nose and "it felt as if there were electricity in it, just as if sparks were jumping out." This sensation went away after 6 p. m.

I decided to wait a few days before giving her another injection, but on Dec. 15 I gave her a third one, in the center of the abdomen. The next day I noted the same conditions as followed the prior injections, i. e., local swelling and burning. All the other conditions were excellent. Dec. 18 I found all the swelling and burning gone, no asthma, no neuralgia, and she said that she had never felt better in her life. She was able to go up and down stairs, something she could not do for the last two years. She

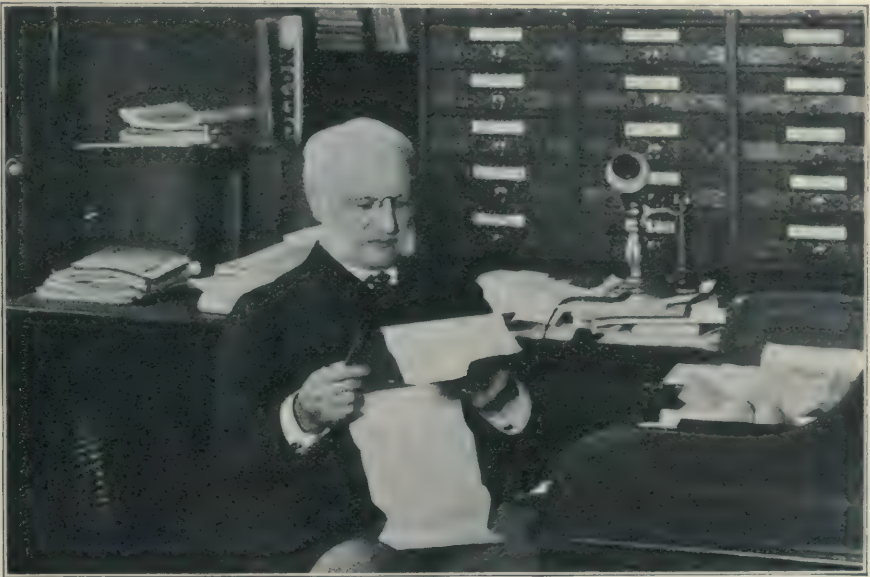
others will report results. I am keeping this patient under observation and will report any developments in her condition, either favorable or unfavorable, as occasion may rise.

W. F. RADUE.

Union Hill, N. J.

THE DEATH OF DR. REILLY

"Chicago's Most Useful Citizen"—this is the title given by the newspapers of this



THE LATE DR. FRANK W. REILLY

also lay down in bed and slept all night. This she had not done for two or three years; she always had to prop herself up in bed with pillows to get relief so she could get some sleep.

I can verify the truth of this statement, having been her physician for the last four years. I wish to note that this patient was menstruating at the time of the injections and instead of the flow being increased it had just the opposite effect. The flow stopped on the third day, whereas she generally flowed seven days. This is contrary to the experience of Dr. Mays.

In closing I will say that as the results in the above case were so remarkable I hope

city to Dr. Frank W. Reilly, who passed away Dec. 16, 1909, aged nearly 74 years. Since his graduation from the Chicago Medical College, in 1861, nearly all of Dr. Reilly's career has been passed in the public service, first as a surgeon in the 26th Illinois Infantry during the Civil War, then as a sanitary inspector in Chicago, for six years in the Marine Hospital Service, for several years more as Assistant Secretary of the Illinois State Board of Health, and for the last fourteen years as Assistant Commissioner of Health in Chicago. As the *Bulletin* of the Health Department states, "his appointment marks the beginning of the efficient management of sanitary affairs

in this city." It is due largely to the conscientious and efficient service of this citizen of Chicago that it has the lowest death-rate of any large city in the world. We cannot do him too much honor.

CROTALIN: AN IMPROVED METHOD FOR ITS ADMINISTRATION

In previous communications* on the action of crotalin the writer stated that the back of the forearm is being used for its hypodermic injection. This site had been selected because it is convenient, but chiefly because it is removed some distance from the center of the body and so offers a comparatively safe position in case of any untoward complication that may follow its introduction. The latter reason had a special bearing on the anxiety of the writer when he made his first few injections without any obtainable previous knowledge of the probable behavior of such a powerful poison on being introduced subcutaneously in the human subject, even in a small quantity.

That crotalin accomplishes all that has been claimed for it when given in the forearm has been confirmed by more than a year's experience with it, yet the writer has seen proof recently that it renders more prompt service when introduced over or near the seat of the local trouble. Thus, in lumbago and sciatica it acts with greater quickness when it is injected over the seat of pain in the lumbar region, or over the course of the nerves in the legs, than when given into the forearm. This is not surprising when it is recalled that morphine brings the quickest relief when it is injected over or near the seat of pain.

The same is true of tuberculous laryngitis and phthisical affections of the lungs when crotalin is introduced directly over the vagi in the region of the neck. Owing to the writer's previous favorable experience with silver-nitrate injections over the vagi in pulmonary diseases, this method of injecting crotalin had for some time been present in his mind, but was not attempted on account

of a possibility that the edema which develops at the site of injection might prove detrimental to the rather loose tissues of the neck. That this fear was groundless was demonstrated a short time ago in a desperate case of phthisical laryngeal ulceration in which, after the arm had for several days been repeatedly injected with large doses of this drug, but without much avail, a single dose of 1-200 grain of crotalin, given over the left vagus, followed by another dose of the same strength in a few hours over the opposite nerve, promptly relieved the agonizing pain in the throat and the difficult breathing and swallowing. During the ten days in which the patient lived after this, his entire suffering in the throat as well as his cough and dyspnea were kept in subjection by daily injections of the same dose of crotalin on alternate sides of his neck.

Since the neck-method has shown itself to be free from danger, crotalin has been used in this way in the treatment of phthisis, bronchitis, asthma, epilepsy, etc., by the writer, in connection with the forearm-method, and it is believed with greater promptness and effectiveness than formerly.

The place for the needle-puncture is immediately over or slightly behind the pulsating carotid artery, in the region of the neck, in a line between near the angle of the jaw and the clavicle, and nearer the latter than the former point. In order to avoid puncturing the carotid artery or its neighboring jugular vein, it is important to pinch up the skin between the thumb and the forefinger of the left hand and introduce the needle just under the elevated skin.

It seems on the whole that the dose for the neck-injection is smaller than that for the forearm, and, so far as can be seen at present, varies from 1-400 to 1-100 grain, given once or twice a week, and on alternate sides of the neck, or if only one lung is affected, most of the injections are to be given on that side. In asthma, bronchitis and epilepsy small doses have been given on each side of the neck at the same time,

The object of this brief announcement is to bring to the notice of the profession that the neck-method combined with the fore-

**Boston Medical and Surgical Journal*, April 15, 1900, and *American Journal of Clinical Medicine*, December, 1900.

arm-method yields better results from smaller doses of crotalin than by the forearm-method alone in all cases of pulmonary disease, and probably in many other disorders in which the vagi or the respiratory centers are involved.

THOMAS J. MAYS.

Philadelphia, Pa.

A CASE OF SPINA BIFIDA

I am sending two views of a baby that was born in my practice and which presents



View of Dr. Childs' case, from the back

some interesting features. The child was born at full term, and the mother, a woman of Irish decent and in excellent health, was a multipara. The labor was normal, except that there was a breech presentation.

When born, I found that motion in the baby's knee and ankle was greatly impaired, the feet were turned in toward the head, and there was also spina bifida, as will be observed in one of the pictures. The child was normal in other respects and weighed eight pounds. However, it took nourishment poorly and lived only seven days.

H. E. CHILDS.

Noble, Okla.

[The pictures are not very good, being evidently of the "snap-shot" variety; however, they clearly show the spina bifida and the paralysis of the limbs. In all probability the latter condition was due to lack of development or destruction of the spinal cord, which is often the case in spina bifida.

There is a suggestion of defect of the anterior wall of the bladder, though we suspect that this appearance is due to the indistinctness of the photograph.—ED.]

REPORT OF THREE CASES OF SCARLET-FEVER

Case 1. Nov. 27 I was called to see a six-year-old boy, who had been sick thirty-six hours. His first symptoms, the onset being sudden, were severe headache, vomiting, sore throat and high fever. I found a well-developed case of scarlet-fever. The throat was typical, and the whole body was covered with the rash, it having extended to a point half way between the knees and ankles.

I at once gave the usual calomel and podophyllin, following it with epsom salt, and began calcium sulphide, 1-2 grain every hour to saturation. The calcium sulphide was kept up, with the addition of aconitine and digitalin. After three days of this treatment the fever had disappeared and the child was comfortable. I continued the calcium sulphide, fearing middle-ear trouble.



Another view of Dr. Childs' case, showing paralysis of legs.

On the seventh day from the onset he developed lobar pneumonia of the left lung, and the urine was almost suppressed. I treated the pneumonia with the alkaloids and pushed potassium acetate for the kidney complication. Five days of this treatment ended the pneumonia and the diuretic was continued for four days longer, when I

had a hurry-call to see the patient at about 9 o'clock at night.

When I arrived I found that the child was unable to swallow except with the greatest difficulty, regurgitating fluids through the nose. He was unable to speak and could not grasp objects with his hands on account of choreic movements. All the limbs twitched and respiration was slow and jerky. The whole condition was a picture of an aggravated case of St. Vitus' dance, the paralysis of the muscles of deglutition and of the vocal cords pointing to some brain lesion.

The treatment given was strychnine arsenate to effect and has been kept up until the present time. The little fellow can run about the house and has no visible signs of his illness except the emaciation and a few ragged corners of skin at the edges of his feet where desquamation is not complete.

Case 2. Dec. 1, I found the two-year-old baby in the same family with all the symptoms of the disease, it having been sick twelve hours. The throat was scarlet, fever 103.2° F., and the eruption showing on its neck, in the axillæ and on the buttocks. There was some enlargement of the cervical glands.

I gave calomel, 1-2 grain, to be followed in six hours with castor oil. At the same time I began calcium sulphide, 1-6 grain every half hour, to be continued until signs of saturation; then I increased the intervals to one hour. I saw the child the next morning and found that the rash had so nearly disappeared as to be barely discernable and the throat had regained its normal appearance, except for a slight enlargement of the tonsils. Recovery was uneventful, and without ear or throat complications. I kept up the saturation with calcium sulphide for two weeks in this case. There was no desquamation and consequently no kidney trouble.

Case 3. Dec. 3, a ten-year-old boy in the same house showed all the classical symptoms of scarlet-fever: red throat with great soreness, high temperature, vomiting, while a zone around the mouth and the eruption appeared on the neck and in the axillæ. I unloaded the bowels and pushed calcium

sulphide to saturation, with precisely the same result as in Case No. 2.

Now, the point I wish to make is this: In case No. 1 *the patient had been sick thirty-six hours before treatment was instituted.* In Nos. 2 and 3 the treatment was begun as soon as the disease was recognizable. Cases Nos. 2 and 3. were "aborted" or cured within twenty-four hours.

It seems that early diagnosis is imperative in these cases and that no time is to be lost in pushing calcium sulphide to saturation.

ALSON BAKER.

Dreyfus, Ky.

[Doctor, your point is well taken. There is every incentive to early and vigorous treatment, of which thorough saturation with calcium sulphide should be an essential part. That (given early) it will cut short the course of scarlet-fever, measles, whooping-cough, smallpox—even yellow-fever, we are absolutely convinced, and so is everyone who has given it a sufficiently exhaustive test.

The complication in the first case is unusual and deserves more careful study. Sorry we haven't a complete laboratory report. Often this would throw a flood of light on the diagnostic niceties, which mean so much to successful treatment. Any ideas, brothers of the family?—ED.]

NOTES FROM PRACTICE: ARBUTIN, SULPHOCARBOLATES, CHROMIUM SULPHATE

I am going to give you a few of my therapeutic experiences:

Arbutin.—It seems to me I get best results from this drug in cases of acute or chronic cystitis. It lessens the frequency of urination, soothes the inflamed mucous membrane and in dosage "to effect" rapidly cures the majority of them. I have also found it useful in chronic hypertrophy of the prostate. Recently I had an old man of 70, otherwise in good health, who had to use a catheter at different times, finally becoming unable to urinate at all. I drew off a lot of thick, milky, pus-laden urine.

He was placed on podophyllin and calomel to keep the bowels clear and green pills of urotropin, arbutin and lithium benzoate. For three different days it was necessary to catheterize him, but for the last two months he has had no trouble in urinating, and says he is better in that way than for ten years past.

This is only one case, but in *every* case where I have given it in enlarged prostate there has been at least slight benefit. I don't expect to cure these cases, but if it makes the patients comfortable it is all they ask.

Sulphocarbulates.—In my practice I use an amazing lot of sulphocarbulates. The use varies from summer diarrhea to chronic gastritis. Given in cases of dyspepsia with gas formation, to be taken in 5- to 10-grain doses after meals, the relief is often marked, not only in the amount of gas formation but in the digestive processes as well. It is preferably given an hour after eating dissolved in water or followed by a glass of water.

Our specialists use zinc sulphocarbolate in the strength of 1 to 2 grains to the ounce of water for a spray in simple chronic catarrh of the nasal cavities, and if it is of benefit in this condition (and it is) the combined salts should be of the greatest benefit in chronic gastric catarrh with hypersecretion of mucus, or in hyperchlorhydria. On this reasoning I gave the sulphocarbulates recently in a case of acid dyspepsia, combined with sufficient sodium bicarbonate to neutralize the acid for the time being. In one week the patient was improved and needed much less of the soda, and after two or three weeks he had very little trouble and could dispense with the soda altogether. In addition to the preceding he had strict regulation of the *primæ viæ*.

Chromium Sulphate is rather a disappointment to me thus far. I used this drug in one severe case of neurasthenia without effect, although I gave it a good trial. One case of enlarged prostate, in an old man of 80, seems to be improving quite rapidly, though it is hardly time yet to judge of its permanent effects.

Thyroid Extract.—I recently gave thyroid extract to a patient who had menstruated every two weeks for several months. She is approaching the menopause. The menstrual function resumed its normal course and has continued so for several months.

R. A. BLACK.

Sullivan, Me.

[This is a very interesting report. We should have many of them. We are particularly anxious for more data regarding chromium sulphate. Who will give it?—Ed.]

LEGITIMATE KNOCKING

The knocker is prevalent here and elsewhere. He is in evidence in the medical journal as well as the lay paper. There is a vast difference in legitimate knocking and the other kind. The illegitimate knocker *always has an axe to grind*. The legitimate knocker has some better reason than that for his knocking.

The editor of CLINICAL MEDICINE knocks at "galenicals," and this is legitimate knocking, because he has something better to offer in the place of galenicals. He demonstrates that alkaloids are more dependable than galenicals. He did not have to show the people (profession) that quinine is a preparation superior to Peruvian bark or that morphine is superior to opium. These two truths were self-evident, but he did have to show that many of the newer alkaloids are better than the old-fashioned extracts on the market. This was not an easy task, but he was equal to the occasion.

He, the Editor, knocks at slipshod therapy, which is also prevalent. The average doctor does not pay much attention to the preparations or medicines he uses. He sends them out and expects results, but if he fails to get results, he rarely ever places the blame on inferior drugs or dishonest druggists, but suspects that the diagnosis was wrong or the case unusually hard to manage.

Dear reader, if you will follow up your prescriptions and examine them closely,

as to taste, appearance, etc., you will soon find out that what you thought would be palatable and elegant in appearance is not so, and after testing you will wonder whether there has not been some mistake made in compounding. You pick up a half-emptied medicine-vial, and it is muddy with much sediment and has a bad odor and a worse taste, and you say to yourself: "No wonder the little patient could not retain this; I could not take it myself. Gee whiz! it is sour, bitter, nauseating, disgusting," and you will turn to the little alkaloidal granules knowing that if these are dissolved in water or swallowed as they are none of those bad results will ensue.

Yes, legitimate knocking is necessary and right. Go ahead, Dr. Abbott, and keep up your racket until you convince the most obstinate that alkaloids are superior to galenicals. It may require time, but all laudable enterprises require time, patience, perseverance and persistence. Success to the legitimate knocker!

W. P. HOWLE.

Charleston, Mo.

CREOSOTE IN PULMONARY TUBERCULOSIS

Dr. E. G. Von der Goltz says, in *The Homeopathic Recorder* for December, 1909, that "in the longer or shorter run the premature death of the consumptive patient is brought on by starvation based on the ruined stomach from the influence of creosote in whatever form in even *minimum allopathic (scientific) doses*." (Italics ours.)

URETHRAL STRICTURE: PATHOLOGY AND TREATMENT

G. A. Rowe, Buffalo, N. Y., in *The National Eclectic Medical Association Quarterly* for December, 1909, claims that the treatment of urethral stricture with medical remedies is not as satisfactory as we might wish; but in the earlier stages or before deep cicatrization has resulted cures may be effected with combined local and internal remedies, more dependence being placed on

the former. Any remedy that will reduce inflammation and favor absorption of the cicatrix tends to cure stricture. Perhaps the agents best suited for this purpose are some of the salts of silver. Protargol in 1-percent solution, or argyrol in from 1- to 20-percent solution injected night and morning will produce the most beneficial results. [Oily solution of thymol iodide will be found to give at least equally favorable results. —ED.]

A CASE OF SKIN DISEASE

The enclosed photo will show you what I believe to be a case of pellagra. This boy, nineteen years old, gives a history of living in this grand country for sixteen years. He has no consumption and no signs of gonorrhea. He joined a thrashing gang at harvest time and went through the season with them, the diet being mainly canned goods, such as tomatoes, corn, beans, peas and other stuff of that description. After his work season was over he thought "boot legging" more profitable than farming, and went at that. He was arrested and given a jail sentence. I being the county physician he came into my hands.

When taken, the hands and feet were first affected. The hands now are practically well, the feet giving trouble. I have him under treatment, giving the iodides and intestinal antiseptics.

I shall follow this case up to a finish as his jail sentence lasts four months, thus affording good opportunity for observation.

E. D. S.

—, Oklahoma.

[Of one thing we feel quite certain—this is not a case of pellagra. To make an accurate diagnosis more complete data are necessary. We should know how long the skin disease has been present; if it is associated with systemic symptoms, or with digestive disturbance; if it is permanent or recurrent; the color, contour and elevation of the lesions; if there is scaling; and finally, the nature of the subjective symptoms, as

itching, burning, etc., It looks like a case of psoriasis, it seems to us.—ED.]

"SCRAP BOOKS AND CLIPPINGS"

When I read a medical magazine I mark with lead pencil the things I should know but don't; these I constantly review for



Back view, same case

months and years until I know these very things and can use them any time or anywhere. Running to reference books frequently will, in time, weaken your memory.

To read a valuable suggestion and then let it pass from memory is a loss of time, also it is not good for your memory.

Much of what I read is simply a review to me or matter that doesn't appear to be useful in my practice, but even in a long and, to me, dry article, I often find a splendid suggestion which I have never heard before and which I simply must not forget. This I mark with a pencil, and when I am making my reviews I find it easily and never allow the dust of forgetfulness to stay long on it, nor do I have to hunt it up in some reference-book as a half-remembered, half-forgotten thought. I also have more confidence in myself.

Here is a sample of my work. In giving calcium chloride, let the patient fill a gelatin capsule with it at the time of taking. The advantage is obvious.

For recurrent boils give dry yeast, one No. 6 capsuleful every three hours.

For bruises give arnica internally.

For sores, cuts and bruises apply succus calendulae locally.

For constipation supply the patient with Waugh's anticonstipation granules and tell him to use just as few as will do the work and by degrees reduce the dose as fast as possible.

For sticky moist eruptions give graphites.

For loss of memory try my celebrated plan of using it properly so as not to let it atrophy.

Possibly you would better blue-pencil the next:

For puffiness under the eyes give apis mel.

For gravel give urtica urens, 5 drops of the tincture in a cup of hot water every three hours.

For hiccough give ginseng, also gargle with water.

For pains that are made worse by rest and better by motion, rhus toxicodendron.

F. POLLARD.

Garberville, Cal.

BARBER'S ITCH

In reponse to the editor's request for suggestions for the treatment of barber's itch (trichophytosis barbae) in the January number of CLINICAL MEDICINE I am submitting the method which has served me best in the cases (seven in all) that I have treated in twenty-three years. (That this is not

a common disease here you will readily glean from the limited number.

Barber's itch is a contagious, parasitic disease, and therefore it is necessary to use antiparasitic remedies for its cure. In the early stages, before the hair-follicles have become involved, we can often prevent its spreading by painting the affected area with a solution of bichloride of mercury, 5 grains to the ounce of alcohol, and adding 2 drams of glycerin to the mixture will improve it. Apply this twice a day, using a cotton swab, a new one every time you make an application.

The following ointment by Ihle is also excellent:

Resorcin	10.00
Starch	25.00
Zinc oxide	25.00
White vaseline.....	50.00

Label: Apply three times a day, rubbing it in thoroughly.

When the hair-follicles have been invaded and tubercles form, more active measures must be instituted. Epilation is now an essential part of the treatment. The hair must be pulled out over the affected parts, and shaving must also be practised here. It is well to shave one day and epilate the next, and to apply the parasiticide after either, reapplying it two or three times a day.

The following will be found excellent: Wash the parts with a solution of mercury bichloride, 2 grains to the ounce of alcohol; then apply this ointment:

Ichthyol	dr. 1
Chrysarobin	dr. 1
Salicylic acid	grs. 30
Lanolin	oz. 1
White vaseline, q. s. ad.	ozs. 2

Label: Apply twice a day and cover with oilsilk.

This treatment is all that may be desired for the successful treatment of this disease, although at times it is very rebellious. Perseverance will eventually overcome it. The next case that comes under my care will be treated with carbenzol. This is a powerful parasiticide and has given excellent results

in my hands in all kinds of skin affections. I use it either pure or diluted, as the case may be. I hope some of the "family" will give this preparation a trial in barber's itch and report results. I am sure it will prove most successful. I would suggest washing the parts thoroughly with carbenzol soap, then applying carbenzol, either pure or diluted.

W. F. RADUE.

Union Hill, N. J.

ANOTHER CURE FOR BARBER'S ITCH

The letter by Dr. C. D. Martinetti on "Barber's Itch" (page 107, January CLINICAL MEDICINE) is interesting. Recently a dentist living in my home town came to consult me relative to a "breaking out" that covered his entire face, "in spots." He had contracted the disease in one of the local barber-shops, the proprietor of which wished to take all the necessary precautions against infection; but luck was against him, as there seemed to be a number who contracted the disease at this shop.

The treatment I gave this patient cured him in four or five days. Here it is: Pull the hairs out carefully over the affected area and apply ungt. hydrarg. oleatis (5-percent) until considerable reaction is excited; then ungt. aquæ rosæ, until the acute inflammation subsides; then twice a day, wipe off the patch with dilute vinegar, and rub in the following:

Sodium sulphite	dr. 1
Vaseline	oz. 1

If there is very much surface involved treat part of it at a time, or the patient will "cuss" you as well as the barber. But you will cure your patient in four or five days by adopting this course.

W. C. SQUIER.

Princeton, Ind.

BARBER'S ITCH

I treated two cases of barber's itch by rubbing dry calomel into the pustules, either open or unopened. My experience has been that they mature very rapidly and the

dry calomel will cure them in several days if used twice a day.

G. L. BAUGHMAN.

Kansas City, Kan.

GRIP AND ITS TREATMENT

I have had this disease on three different occasions. The duration of the first attack was one month. All the remedies used were noneffective, then a Turkish bath was resorted to, with cure. In the second attack I had acetanilid with a Turkish bath. Result: rupture of the tympanum—included in the cure. During the third attack I attended to my professional work until complete deafness and anosmia set in, then superheated dry air at 400° F. was used, which caused a permanent cure, leaving all of the organs normal.

I find there are many persons who seem to believe that superheated dry air at 400° F. and above, the Turkish bath and the vapor-bath are one and the same in therapeutic effects. From my point of view, I have found the Turkish bath and the vapor-bath are positively injurious in grip. In this position I am assured that I do not stand alone, as others have had vicious experiences with them. However, with the superheated dry air, at 400°, 410° or 420° F., a cure of this disease is rapidly completed with little or no loss of time and no evil results to the patient. To make my position more tenable I will mention the following:

Case 1. A young man, age 30, worth about \$3000, was taken sick and passed into the hands of several physicians, who at diverse times called the disease tuberculosis, grip, etc. Seeing no improvement, he was at last advised to go west and from whence he returned a pauper, with the disease still intact. At this stage I saw him. The patient's appearance did not indicate serious sickness; but he was not ambitious. His family wanted him to follow his occupation, which he claimed he could not do, because of his weakness. The family refused him material aid, with the result that he went by the powder-and-bullet-route. Autopsy showed no tuberculosis.

Case 2. Man, aged 40, advertising manager of a large daily paper. He was under the care of a physician, and had taken phenacetin and salol for two weeks, leaving him weak. His debility was intense, the remedy not having any visible effect on the grip. At 4 p. m. the patient was placed in the superheated dry-air apparatus, the thermometer showing a temperature of 420° F. He left the office at 9 p. m., went home (a distance of three miles) through the snow and was at his desk the next morning, a perfectly well man.

Superheated dry air at high temperatures is usually looked upon as debilitating and, it is said, must not be used in persons who are weak. The very opposite is the case, as it has proven itself exhilarant and tonic, and is the enemy of debility in a way that I can not find in any other remedy.

Case 3. In the winter of 1903—4 there occurred an epidemic of grip that was different from anything I had seen before, viz., the virulence of the disease was expended upon the abdominal contents plus the weakness of the grip. In the case of a man, aged 45, superheated dry air at 485° F. was used locally, with an immediate cure.

Case 4. A man, age 25, vigorous constitution. This patient had an attack quite similar to the foregoing, but he refused superheated dry air and preferred other treatment. His physician wrote the prescription which should afford relief; but the patient died on the seventh day.

Of all medicines at the disposal of the prescription-writer there is not one that is of any benefit to a patient suffering from grip. However, the dispensing physician finds in calcium sulphide the one striking exception. I have used this remedy in grip, but heretofore in too small doses. This valuable drug, to be effective, must be given in daily doses of 10 grains and more, and when thus used it ranks as an efficient remedy in grip second only to superheated dry air. It is the only medicine known to me to be effective and is best given up to 100 1-6-grain granules daily for a few days. From this manner of giving this medicine the only disagreeable effect is a thickly coated tongue,

which in this disease proves rather an advantage than otherwise.

Several years ago, at a time when I had hardly recognized the importance of 100 granules of calcium sulphide per day as a dependable cure for grip, a man called, age 50, who remarked after his inspection: "I would rather be taken to Spring Grove cemetery than go in that hot box." He passed on into other hands and died on the third day by the heart-failure route.

There is no contraindication to calcium sulphide known to me, although when using the remedy we do not fail to observe a moist skin. This can not be said of superheated dry air at 400° F., as this remedy requires some attention, viz.: Thrombus (as in ulcer of the leg) if ignored may cause embolus and from such a cause gangrene may result; however, this should hardly be possible in careful hands. Moreover, I have hesitated to use dry air in cases of suppuration when found in connection with appendicitis. If either one of the two conditions is present at the time of the attack or the treatment, it should not be overlooked that there is a remote possibility of complication from this source. Under all other conditions the superheated dry air at 400° F. and above is positively innocent and can do no harm, and it will surely be found a tonic, stimulant and a revivifier of the body-forces second to none, and it is *the* remedy to be selected in the case of an adult suffering from the disease who wants a quick, safe and sure cure.

Coryza.—The combination of atropine, aconitine, morphine and calomel, in small, frequently repeated doses, is sure and quick in action. These remedies, given every fifteen minutes, will give results before the physiologic effect is apparent. They usually place the patient at his work the next day, when they can be taken once every three or four hours.

Acute Bronchitis.—Tartar emetic in small dosage is specific.

Chronic cough and bronchitis in patients with pleasant surroundings and tractable: Intestinal antiseptics will give quick returns. Antisepsis is a satisfactory treatment here.

In muscular rheumatism, lumbago and sciatica, I am partial to the static brush.

A. W. RINGER.

Cincinnati, O.

[Dr. Ringer always has something worth while. His very favorable experience with superheated air is sure to encourage others to give this remedy a careful trial. He does well to praise calcium sulphide, which is a remedy *par excellence* (as our French brethren say) in nearly all the acute infections, and particularly in those affecting the respiratory tract. There is a wealth of helpfulness on influenza in the "Postgraduate Course" this month. Read it!—Ed.]

PNEUMONIA, GRIP, GASTRIC ACIDITY

I would not miss a single copy of the CLINIC for \$5.00. I have learned all I really know about medicine through THE AMERICAN JOURNAL OF CLINICAL MEDICINE.

"Don't know much," says some one.

Well, I admit that, but it's not the fault of the journal, and it the editor will permit I will give a few "thumb-nail sketches" from my seven years' experience with the active-principle remedies.

Case 1.—Mr. R. called his family physician; after about four hours, not succeeding in getting him, he called me and said, "Doctor, I wish you would come down and see my wife. She had a chill this morning which lasted about two hours, and she is now suffering severe pain under the shoulder blade. Come quick."

On entering the room a few minutes later, I noticed an anxious look on the patient's face; right cheek red, left one pale, breathing rapid, with a stitch at the end of expiration; a hacking cough. After sitting down by the patient's bed I thought I saw her spit some blood into the ash-pan, so with a paper I caught some of the sputum and, sure enough, there was the typical rusty sputum, a little bit brighter than usual. There were new-leather râles over the lower lobe of the right lung; pulse 110, temperature 103° F. She was restless, tossing from

side to side, almost delirious; respirations were thirty per minute.

I said to Mr. R., "Your wife has pneumonia."

"We thought she might have," he said.

Treatment: I emptied the bowels with soapsuds enema, gave calomel and podo-phyllin every hour to effect, followed with a saline laxative, then gave sulphocarbolates every two hours in 10-grain doses. As the pulse was full and bounding I gave the dosimetric trinity every five minutes for one hour.

"Dangerous," says someone.

Yes, but I had a watch in my hand and fingers on the pulse. By this time the pulse was 100, respirations 25, temperature 102° F., skin was now getting moist. Then I gave a granule every half-hour until the temperature came down to 100, then a granule every hour for twenty-four hours, when the temperature was normal. She sat up on the third day and went home on the fourth, as she was visiting her sister about a mile from home.

I went to see her every eight hours for three trips. I am not afraid to give these granules rapidly when I am looking the patient in the face and have my fingers on the pulse.

After she made such a quick recovery some said she didn't have pneumonia, or she would not have been up within nine days, but more probably fifteen or twenty.

I have had several cases similar to this with results as good, and would make affidavit that in these seven years I have not lost a single case of pneumonia, i. e., if I am able to tell a case of pneumonia when I see it. My rule is to work fast in cases of pneumonia, stop the congestion, equalize the circulation, and keep the bowels nice and clean.

Case 2.—Mr. L., age 25, married, two children, family history good. He suffered for three weeks with severe pain in the left temple, growing worse from sunrise till noon, then better as the sun went down. Another physician gave morphine, but the trouble was not controlled. When he came to me I dissolved eight granules of atropine,

gr. 1-250 each, in one ounce of water and dropped three or four drops in the eye; next morning I gave the same treatment. The next time I saw Mr. L. I asked, "How is your head now?"

"It's well," he said, "and has been ever since you put that medicine in my eye. I went home and remained in the house till noon the next day waiting for the pain to return, and as it hadn't I went to my work that afternoon and have been able to work ever since. The pain never did return."

I have cured several cases of chronic nose bleeding with atropine. I have never had a case of postpartum hemorrhage, as I give atropine early and to effect.

I control the flow of the menses with atropine, when it is too profuse.

When my wife was about six months pregnant she suffered with hyperacidity, worst case I ever saw; couldn't take any nourishment, had intense pain in the stomach, said she felt like there was a coconut or something of that kind in it. I could not get anything from the textbooks that would help me.

After I had been up night and day with her for two weeks, I gave her hyoscine, morphine and cactin. Her face, which had been pale, in about thirty minutes began to flush a little. She said she was getting easy. In less than an hour she went to sleep and rested well all night and wanted nourishment next morning. I gave two more evening doses and improvement continued rapidly until she was up again within four or five days from the first dose.

I have had some valuable experience in the treatment of typhoid fever, pneumonia, smallpox, grip, obstetrics, etc., successfully treated along alkaloidal lines.

Will say in conclusion that I value your journal above any other medical literature. There have never been enough good things said about you and the great work you have done. I am very much pleased to know that the medical profession is so rapidly falling in line on active-principle medicine.

J. A. PRESLEY.

O'Brien, Tex.

[Whether pneumonia or not, the first case was caught in its incipency, and none too quick. The name-diagnosis matters little. Everyone should read Dr. Shaller's article, this issue. As he says, "As a rule there is no difficulty in breaking up or checking a congestion if correct treatment is applied early enough." The secret of success is to get busy *early*, and if before the stage of positive recognition of a pneumonic process, so much the better for the patient.

Dr. Presley's method of "getting next" on that case of headache was well thought out. Probably there was some refractive trouble, the tension of which was relieved by the cycloplegiac. Hope you sent Mr. L. to a good oculist, Doctor. That's the proper "follow-up."

Your reasoning was good in your wife's case. When you have a pallid face, with severe pain (especially in headaches), don't further depress the circulation with acetanilid or similar drugs. The hyoscine combination which flushes the face physiologically while relieving the irritability of the secretory nerves, arresting the too great activity, met the indication. The one thing to remember is that this combination should not be given continuously for any considerable period. More, Doctor!—ED.]

INFLUENZA AND ITS TREATMENT

Dr. Candler's paper in the February, 1909, number of *CLINICAL MEDICINE* is an admirable production on that subject, but contains some frills on treatment that, however useful they may be in a wealthy and educated clientele in a city, are practically without merit to those of us who are doing rough-riding in the country where, in this season of the year, we treat the disease daily.

Firstly, many of us are doing business a few or many miles from a base of supplies and cannot write an order and start a man to the drugstore or instrument-maker, or both, to procure the articles which the doctor describes, but must perforce carry with us our own implements of war, and these things would be both too expensive and cum-

some—expensive for our patients and cumbersome for us. For instance, I start on my rounds on horseback with two pairs of saddlebags and a hand-satchel loaded with tablets, pills, powders, alkaloids, etc., all my horse can carry through sand from six to twelve inches deep, with my weight added, hence it will be seen that more would certainly be an encumbrance. On my round, covering possibly 20 to 25 miles of mire, I may make from six to ten stops to prescribe for grip and would have to carry necessary instruments for at least that number.

Secondly, many of our patients are illiterate—very much so, in fact—and would not comprehend the use of the frills if explained to them, hence either from ignorance or carelessness, or both, they would disregard the instructions.

Thirdly, many of our cases will be housed in a log hut containing one room 14x18 feet in size, with a shed behind in which the cooking is done, and in this enclosure there live from six to twelve people, half of whom may be down at one time with the grip. Here will be seen at once the impracticability of isolation of the well portion of the family who may never take the disease at all because of their resisting power, especially if their condition be inquired into and whatever is amiss with them corrected at once by the indicated means. In most of these cases the means indicated will be a thorough cleaning of the alimentary canal.

I am fully convinced by my experience that grip is a multiple infection producing an autointoxication, mainly gastrointestinal, and that the local infection is comparatively insignificant so far as systemic disturbance is concerned. Local treatment therefore is merely palliative for the local expression, and the great battle must be fought by the internal treatment.

Without criticizing Dr. Candler's treatment except for its inconvenience to us on the outskirts of civilization, I purpose to outline a treatment for the rough-riders in the profession which has given me satisfaction for many years, and in which cumbersomeness and inconvenience are conspicuous by their absence.

Right at the start I want to say that aconite or aconitine, strychnine and calomel will positively cure three-fifths of the average cases of grip within one week, other things being equal.

The first reduces congestion, prevents inflammation, and controls the fever.

The second increases respiratory power, hence measurably prevents extension of the infection to the pulmonary tissue, and sustains the vital recuperative power of the patient.

In children, old people and asthenic cases I give the strychnine arsenate, and in the robust sthenic young and middle-aged people the sulphate is preferred by me.

The third remedy is given for its detergent effect, at first in considerable amounts, from 3 to 10 grains according to the patient's condition, in divided doses, followed by a saline, and after evacuation of the bowels it is continued in 1-10-grain doses every two hours until the patient is on his feet, for the purpose of inhibiting the toxemia; and this is the vital point, *inhibit the toxemia*.

In selected cases it may become necessary to give the combined sulphocarbolates or salol instead of the calomel, but as a rule calomel suffices.

If there is a marked pharyngitis with sticking pain on attempting to swallow, calcium sulphide in suitable doses will speedily subdue it. I usually give 1-2 grain every one or two hours for three to five doses.

If there is severe congestive headache with photophobia, belladonna or atropine will soon give relief. If the headache be accompanied by flushed countenance, watery discharge from the nostrils, contracted pupils and drooping eyelids, gelseminine will cure it. If the headache is aggravated by light and the face is very red, glonoin will be helpful. If there be violent sneezing with watery discharge, iodized calcium, one grain, every hour for three or four doses will be effective. If the temperature is high and there are marked indications of toxemia, such as drowsiness or stupor, and it appears wise to promote elimination rapidly through diaphoresis, 10 grains of zomakyne in hot

solution every hour for three doses will be effective. Pilocarpine, of course, will do as well, but I have given the coaltar combination the preference in practice.

For detergent effect of nares and fauces a weak solution of sodium chloride or sodium bicarbonate snuffed into the nostrils or gargled is sufficiently effective in the earlier stage of the disease. Later, when the discharge from the nostrils is profuse and mucopurulent, one grain potassium permanganate to the ounce of boiled water is to be preferred; stronger solutions will prove irritating to the mucosa. Very often, however, these measures are superfluous and the patient does not wish to be annoyed by them.

If the cough is severe, spasmodic, arising from a tickling in the pharynx, accompanied by dyspnea, and aggravated by lying down, belladonna or atropine will speedily cure it. If the cough is loose and rattling, the same remedy is apt to be very useful. If the cough is harsh and the chest muscles are sore from coughing, bryonin is the remedy. If there are no specific indications for other treatment of the cough and it is very annoying, heroin in doses of 1-16 to 1-24 grain has given satisfaction.

If an expectorant is needed, I prefer apomorphine to all other drugs of this class. The dosage must be according to the patient's idiosyncrasy. Grain 1-67 hourly has been very effective with some patients, others have required larger doses.

For the intense aching so common to these cases salol or zomakyne [An acetanilid compound tablet.—ED.] have been very useful; as a rule, however, as soon as effective intestinal elimination has been established, these pains disappear. The fluid extract of eupatorium, in doses of 10 minims, in hot water every hour until diaphoresis is established will greatly mitigate the aching, but larger doses will nauseate many patients because of the intense bitterness of the drug.

The great difficulty with influenza is met with in patients advanced in years, and here strychnine arsenate should be pushed at the rate of 1-50 to 1-30 grain every two or three hours until there is a reaction, then less frequently, not forgetting to inhibit the

toxemia with calomel, 1-10 to 1-5 grain every hour to effect, then less frequently to maintain antiseptis.

Two points we should always remember, viz.: (1) that we have a toxemia presenting the symptoms common to that state; (2) that we have a patient with an individuality who may present symptoms contrary to any other individuality, and our aim should be to make our treatment conform to both elements. This is scientific prescribing.

For reconstruction, especially with the aged and those with a tendency to pulmonary weakness, there are few remedies which compare favorably with our time-honored friend, the syrup of hypophosphites comp.

M. B. TULLER.

Crawford, Ky.

[It appears to me, Doctor, that for a "rough-rider at the outskirts of civilization" your treatment is pretty civilized and might confidently be carried out in the centers of population. When you object to the "frills" described by Dr. Candler in the paper referred to, you must remember that CLINICAL MEDICINE visits all sorts and conditions of physicians, some of whom like the frills while others do without them, from choice or from necessity. But all are brainy and thinking men who pick out from the information in the journal what best helps them in their work. As to what is "frills" opinions differ. Not so many years ago the telephone belonged to that class. Today it is a necessity. In like manner certain methods of treatment may appear finicky and "frillish" (if I may coin the word) to some, while others regard them as indispensable. It's all a matter of opinion.—ED.]

THE BACKBONE MONTHLY

The first number of the little monthly is now ready. If you are a subscriber you have already received your copy; if you are not a subscriber you should "line up" at once—also push along The Backbone-Club movement by helping us place the publication in the hands of as many laymen as possible.

The first number contains many things of special interest. For instance, there is a little article on "New Year's Resolutions" by "Snips," which is as funny as it is sensible. Dr. Butler tells the objects of The Backbone Club, an organization which purposes to fight graft and falsehood; there is the first of a series of letters "From a Baseball Fan to His Son;" an article on "That Body of Ours;" a poem on "The Doctor," by James Whitcomb Riley; "Richard Parr—A Man with Backbone," by Alfred S. Burdick, tells the story of the man who forced the disgorgement of \$2,000,000 by the Sugar Trust. (Mr. Parr's picture is used as a frontispiece, and he is elected first honorary member of The Backbone Club.) Dr. Ernest F. Robinson writes on "Do Your Own Thinking." A poem by Dr. W. F. Radue, "If I Were You," is excellent. "Quit Your Fussin'" is another poem, written by "Uncle George." Still another poem, "Be a Vertebrate," is contributed by L. W. Zochert. Lots of other verse. There is a bunch of "Success Pointers" by Dr. Abbott, an article by Dr. Lanphear, and a whole "String of Vertebræ" by various people.

We miss our guess if *The Backbone Monthly* doesn't make a hit. Many members of the "family" have "come over the plate" with their subscriptions. Quite a number have sent in subscriptions for their friends and customers—some fifty or more each. Inasmuch as this little magazine is to serve as a bracer for the doctor and as a real helper in giving him support it should be taken up strongly and earnestly. Just to show you how it is appreciated by those who are behind the scenes I will whisper that one large New York firm has subscribed for more than 500 copies to be sent to its customers—and that others are likely to do the same, if we can judge by our very flattering correspondence.

The publishers of *The Backbone Monthly* will appreciate your cooperation—and they would simply love to have your coin. Fifty cents pays for one copy for one year. Three subscriptions for a dollar. In bunches of five or more you get it at half price—25

cents for each subscription. Why not put some of your friends on the list? We want to build our list up to 25,000 within three months. Send us \$1.00 and we'll send you forty copies of the first issue for distribution where they'll do the most good.

DO YOU WANT THE INDEX?

If you wish a copy of the annual index of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* for 1909 please drop us a line at once. The index has been prepared with unusual care this year, and is, we think, the best we have ever had. It is now printing, and should be ready for delivery by the time this copy of the journal reaches you. It is free to every subscriber.

CICUTINE HYDROBROMIDE AS A SEDATIVE AND HYPNOTIC

Cicutine hydrobromide merits the attention of the profession. In a case of cancer of the intestines coming under observation about two years since I found three granules, 1-67 grain each, given every four hours, to relieve pain materially and afford necessary sleep.

For a "fidgety" condition it works much quicker in doses of two granules used according to indication. About six weeks ago I was called to see a case of cerebral apoplexy with left-sided hemiplegia.

The case progressed favorably, yet at times there was involuntary and extremely painful muscular contraction in both lower extremities, worse in the left. In this condition hyoscine, morphine and cactin were given hypodermically, and afforded relief, but the condition returned after the effect of the combination had worn off.

I then put him on two granules of cicutine hydrobromide, gr. 1-67 each, every half hour, and after the third dose he went to sleep and had a comfortable night, awaking without any drug after-effect whatever. I used the hyoscine-morphine combination for immediate effect, which was to entirely relieve pain; then followed with cicutine hydrobromide as above.

I concluded that two granules was the proper dose to prescribe in this case, and so directed that it be given every half to four hours according to the condition. I have always found the hyoscine, morphine and cactin reliable and practically free from the bad effects of morphine alone or combined with atropine. I use the half-strength tablet.

I have under treatment an old lady, the victim of cerebral softening. Cicutine hydrobromide lessens the severity of the attacks of irritability. She requires one or two every two hours. There do not seem to be any bad after-effects. Later I will give the results.

What would a therapeutic nihilist do in such a case? H. R. POWELL.

Poughkeepsie, N. Y.

[I heartily approve of Dr. Powell's suggestions. Try the cicutine hydrobromide also in painful menstruation (functional) in place of or in addition to the uterine- tonic formula. Give it or the uterine sedative. It works like a charm in most cases. Cicutine, from the white hemlock, is a spinal sedative and as such has a wide range of usefulness.—ED.]

THE INTERNATIONAL AMERICAN CONGRESS OF MEDICINE AND HYGIENE

The International American Congress of Medicine and Hygiene of 1910 in commemoration of the first centenary of the May revolution of 1810, under the patronage of His Excellency, the President of the Argentine Republic, will be held May 25, 1910, in Buenos Ayres, Argentine Republic.

Dr. Charles H. Frazier (Philadelphia, Pa.) is chairman and Dr. Alfred Reginald Allen (Philadelphia, Pa.) is secretary of the committee for the United States.

The Congress has been divided into nine sections, each section being represented in the United States by its chairmen. The official languages of the Congress will be Spanish and English.

Papers may be sent direct to the chairman of the particular section for which they are

intended, or to Dr. Alfred Reginald Allen, secretary, 111 South 21st street, Philadelphia, Pennsylvania.

"CLEAN OUT, CLEAN UP"—WHERE DIRECTIONS WERE FOLLOWED TO THE LETTER

As I read in the *Helpful Hints for the Busy Doctor* a little article entitled, "An Experience with Carbenzol," my memory is forcibly taken back to a patient with whom the maxim, "Clean out, clean up and keep clean," was applied literally. I was called six miles to see William W., age 73, a retired quaker preacher. He was a man who took everything told him as gospel truth. I found him with a coated tongue with the imprints of the teeth, abdomen distended with gas, bowels not active, engorged liver, no desire for food, urine scanty and highly colored, extreme soreness in the muscles, and the mind as if a cloud were hanging over it.

My diagnosis was autointoxication, following retained fecal matter.

The best I remember, the treatment was calomel and podophyllin in doses to effect, with the sulphocarbolates. The next morning a large dose of magnesium sulphate was to be taken with "lots" of water.

On retiring from his room, I said, "William, don't eat a thing until I get back; which will be tomorrow afternoon, just at 3 p. m."

"Say, Doctor!" he asked, "how much water does thee say a 'lot' of water is under the circumstances?"

Jokingly I said, "O, a gallon will do," thinking he would perhaps drink a pint.

In twenty-four hours I returned to my old friend and patient, finding him much better, with skin moist, tongue clean, mind clear, no distention of bowels—in fact, to my surprise, every condition was as we would want to find it.

"William," I said, "you are much better today."

"Yes! but I did not follow thy directions."

Of course I readjusted my glasses, tilted back in my chair ready to give him a professional scolding for not following direc-

tions, when he had placed his case confidently in my care.

"Now," said I, "what have you done and why?"

"Well," responded my aged friend, "thee told me to drink a gallon of water, and for the life of me I could not get but three full quarts down me."

For a short time I could not think of a word to say, only—

"You made an effort to obey instructions!"

"Yes, and I am well."

After this effective "clean out, clean up and keep clean" he remained well until he had received the final summons, when he just rounded his four-score years.

L. J. BALDWIN.

Westfield, Ind.

[The good old preacher was evidently a godly man, for he piously practised the maxim that "cleanliness is next to godliness." Isn't it wonderful what a marvelous change is often effected in the condition of a patient by merely getting the alimentary canal clean—*thoroughly* clean.—ED.]

A GOOD FRIEND AND HIS WINTER OUTFIT

I have taken THE ALKALOIDAL CLINIC (now THE AMERICAN JOURNAL OF CLINICAL MEDICINE) almost continuously since 1897. I dropped it for a few months, then ordered it again, and was happy once more.

By the way, I wonder if Dr. Waugh remembers the "yokel" who called at his office one night in Philadelphia, in 1888, asking for an endorsement of his diploma, just received from the Long Island Hospital College, so that he could practise medicine in Pennsylvania. Well, Prof. Waugh asked me whether diphtheria was primarily a local or a constitutional disease, and how to treat a case of pneumonia. I think if I had answered the second question as Dr. Waugh now thinks he never would have given me the signature and letter I had gone to get. However, I got it!

I practised medicine in Pennsylvania a while, then returned to my native state and



DR. STROBEL AND HIS CUTTER

county. I have been here ever since, and am what my friends call a success. I enjoy the work, the scenery and the work in general. Within twenty-five miles there are scores of beautiful clear-water lakes in the woods, *not* famous for belonging to New York millionaires, but the "real thing" just the same. I hie me to them to fish, quite often.

The cutter shown in the picture which I am sending you is a dandy. It is put out by John E. Hobbs, North Berwick, Maine. Write him, brothers, if you are thinking of a new cutter—and this is a good year for sleighing.

C. G. STROBEL.

Dolgeville, N. Y.

[It's pleasant to have these recollections stirred up once in a while—and I am glad that the recollection is also a pleasant one for Dr. Strobel. Yes, we all know a good bit more about pneumonia—and other things as well—than we did in the good old days.—ED.]

"HEALTH AND HAPPINESS"

Those are two things that everyone wants, but unfortunately in the chase for them the individual is too often led into all sorts of follies and persuaded to take up with all kinds of bizarre beliefs. The magazines which have made it their mission to teach health too often are but the mouthpieces of crack-brained or self-seeking men, who have defamed the medical profession and are constantly doing it (or trying to do it) almost unbelievable harm. We are glad to say that there is at last a journal in the field which purposes to do this work and at the same time stand behind the doctor. This journal is *Health and Happiness*, published by the Dickim Publishing Company, Ravenswood Station, Chicago. With the January number there is a radical change in its editorial staff, which is now headed by our old friend, Dr. George F. Butler, in association with the Rev. A. H. W. Anderson. From this time on we expect to see it simply *hum*.

In the January number, now in press, here is the first of a series of articles by Dr. Abbott. This series, which will be continued throughout the year, will discuss the relations of the doctor to the layman. In this series Dr. Abbott will handle the fads and follies of the day without gloves, and show by contrast what the doctor is doing for the people, and what he can do when he can have their support. It is the purpose to supply reprints of these articles for distribution. In this number there is also a beautiful exposé of Christian science, by Dr. Anderson. It throws a strong light on something that most people do not see clearly. Every physician should read it. Dr. Butler's strong editorials move along cognate lines, and will most assuredly set people thinking.

Health and Happiness deserves your support. Subscribe for it and leave the copy in your reception room. Interest your local clergymen in it. Get it into the hands of your patients. Many of them need a strong tonic for their beliefs, just such as it supplies. The subscription price is \$2.00 a year.

"Never put off until tomorrow what you should do today!"

LOBELIN SEEMINGLY HELPFUL IN INGUINAL HERNIA

It was in the latter part of last June that a man asked me to see a case at a distance of about four miles from my residence. But as I was suffering from sore throat and it was raining heavily, and I was obliged to go to the sea coast, I could not comply with the request of the man. In a village like this no conveyance is available. I therefore advised the man to seek other aid. I explained the serious nature of the case to the friend of the patient and that immediate aid was necessary. But he would not understand and insisted upon my giving some medicine at least if I could not go to the patient.

From the history I could gather that the patient for several years had been subject to reducible inguinal hernia. The attacks

came and passed away within a few hours. This time the attack had persisted for three days and the man was in great agony. In order to satisfy the messenger I gave him one dozen granules of lobelin, 1-12 grain, directing him to administer to the patient one granule every one-half hour till relieved.

After three or four days the man returned with great joy bringing six or seven of the granules back with him. He handed over the granules to me saying that hardly five were given when a sudden fit of colic came on and with it the patient passed a copious stool and he felt all right, and he was now attending to his business. The patient is a fisherman by occupation.

I cannot say whether the favorable result was brought about by the drug or was spontaneous. I regret very much that I could not watch such an interesting case personally owing to the illness from which I was suffering.

SHANKER CONOJIF,

Malvan, Dt. Ratnageri, India.

[Your patient was certainly very fortunate, Doctor, in being relieved so promptly. I do not doubt that the lobelin helped in overcoming the muscular spasm through which the hernia was retained, but I should nevertheless be afraid to trust to any medicinal agent in the management of such a purely mechanical condition. This is a case for radical measures.—ED.]

DISTANT INFECTION ATTRIBUTED TO OZENA

Castex reports some facts of distant infection in patients with ozena. In a woman 40 years old he observed submaxillary and carotid adenopathies, while in a young man he noticed digestive troubles. Also in different patients afflicted with ozena he noticed cerebral and cephalic troubles, such as cerebral torpor, etc., etc. The improvement of the nasal fossæ was followed by the amelioration of these corresponding divers complications.—*La Médecine Orientale*, 1909, p. 242.



CLINICAL · MEDICINE POST-GRADUATE · SCHOOL & THERAPEUTICS

George F. Butler, M. D., Director
Thomas J. Mays, M. D.
Otto Juettner, M. D.

C. E. de M. Sajous, M. D.
William F. Waugh, A. M., M. D.
Alfred S. Burdick, A. B., M. D.

PART III—LESSON FIVE

INFLUENZA (GRIP)

GENERAL CONSIDERATIONS

The first epidemic of this disease of which we have positive knowledge originated in Italy, in 1173. It spread from there to Germany, and finally to England. The disease has been well recognized since the fifteenth century. The last pandemic started in Bokhara, Turkestan, in May, 1889. From thence it spread to St. Petersburg, Berlin, Paris, London, and finally throughout the United States, reaching this country in December, 1889. According to the last United States census report, 16,645 deaths from influenza occurred in this country during the year 1900, and over 50 percent of these victims were more than 60 years of age, while many were under five. This figure probably is far too low, owing to the fact that many cases are not recognized, the cause of death being reported as bronchitis or pneumonia. Failure to recognize the disease is very common. Some claim that not more than 20 percent of the cases are recognized except in times of epidemic. (Washbourne and Eyer, *Lancet*, Dec. 20, 1902.)

Following the pandemic of 1890, Pfeiffer, of the Hygienic Institute of Berlin, reported the discovery, by himself, of the influenza

bacillus. (*Deutsche Medizinische Wochenschrift*, 1892, No. 2.)

The disease is more prevalent in winter and spring, especially during the months of March and April. The incubation period is rather short, from two to six days. No age is exempt, but the disease is especially fatal before the age of 5 and after 60 years. It is more frequent in those who live or work in ill-ventilated, over-heated rooms or factories. Outdoor workers are much less subject to the disease.

Symptoms.—Influenza usually is ushered in by a chill, followed by fever, prostration, neuralgic pains in the head and extremities, then coryza and cough in the catarrhal form; myalgia is a frequent symptom. Many patients exhibit constitutional symptoms simulating those of typhoid fever. Hemorrhages are frequent and are due to the absorption of toxins. Serious epistaxis is common; this may be from both nostrils, but occurs more frequently from the right. (Breton and Rollet, *Gazette des Hopitaux*, Feb. 9, 1904.)

Complications.—The more prominent among these are, diffused bronchitis, catarrhal pneumonia, even croupous pneumonia, pleurisy, endocarditis, otitis media, neuralgia, anemia, etc. Nephritis frequently oc-

curs during convalescence. It has been asserted that the powerful depressing influence of the influenza-toxins upon the nervous system is a factor in the increased number of suicides. (Jelliffe, *Philadelphia Medical Journal*, Dec. 27, 1903.)

Diagnosis.—W. Stekel (in the *Klinisch-therapeutische Wochenschrift*, Nov. 2, 1902) describes a diagnostic sign of considerable value as follows: In mouth, gums, pharynx and nares are to be found small, yellowish white spots, in size from a pinhead to a split pea, raised above the surrounding mucous membrane. These cannot be rubbed off.

The presence of an epidemic and the finding in the characteristic clear, viscid, yellowish green mucopurulent sputum or nasal discharge of small bacilli with round ends and no spores, resembling diplococci, usually is sufficient.

The influenza bacilli stain with difficulty. They are Gram-negative. The best results are obtained by the use of carbol-fuchsin in dilution of 1:10. This stain requires from three to five minutes. In ordinary coryza there are usually very few bacteria present. The influenza bacilli are mostly found in clumps, free in the mucus, during the attack, and also during convalescence mostly in the pus-cells.

The bacilli are not very resistant; they die in thirty to forty hours if dried at room temperature.

The infection probably is spread directly through the fine droplets of mucus discharged during coughing and sneezing.

In many cases influenza bacilli produce a pseudomembrane on the tonsils simulating that of diphtheria. They often remain latent in the lung for months, then suddenly become active, producing an acute attack. Tuberculous patients especially may carry them for years.

Immunity is transient and, as in pneumonia, a second attack is the rule. Most animals possess a natural immunity. So far no serum of value has been produced for the treatment of this disease.

The blood does not show the characteristic picture of an acute infection. There is an absence of leukocytosis, and no neutro-

philia. Leukopenia is the rule, the leukocytes averaging from 3000 to 6000. This is of value in excluding pneumonia and rheumatism, but the same blood picture is found in tuberculosis and typhoid fever, though the latter can be excluded by the Widal reaction. When complications arise, a leukocytosis with a neutrophilia replaces the leukopenia.

In children catarrhal symptoms are not as common as in adults. Enlargement of the cervical and submaxillary glands is the rule. The fever is irregular and absent at times. It is often subnormal, especially in infants. The prostration is out of proportion to the other symptoms and may be extreme from the first. Nephritis is not frequent in children. (Kellogg, *Medical News*, Sept. 10, 1904.)

Prophylaxis.—Isolate the patient; disinfect the sputa and handkerchiefs soiled with nasal discharge. Preventive measures for the well include ventilation; the admission of sunshine into the room; hygiene of the mouth and nose, especially in children; exercise in the open air; the avoidance of stimulants as well as of overeating. (*Canadian Journal of Medicine and Surgery*, Dec., 1903.)

J. FAVIL BIEHN.

Chicago, Ill.

THE TREATMENT OF INFLUENZA

It has been very commonly observed that those are least able to resist an epidemic influenza whose general health is below the normal, and particularly those already affected with catarrhal troubles of the respiratory tract. In time of epidemics, therefore, maintenance of a stage of good general health places the individual in the best possible condition for successful resistance. This fact, however, has only relative significance, as those even in the soundest bodily vigor are attacked but too often. The healthy man, therefore, will diminish his risk of infection by holding aloof from persons already affected and from localities in which the disorder especially prevails. He should at the same time neglect no meas-

ures calculated to maintain his general bodily health.

Isolate Your Patients.—Influenza-patients should be separated from all intercourse with all persons not necessarily dependent upon them. To effect this, isolation should be effected much as with the ordinary contagious fevers. It is doubtful, however, whether equally vigorous measures need be adopted. At all events, it has not been shown that in a case of influenza there is the same danger of immediate contagion, and in our present stage of knowledge the segregation of attendants and the disinfection of utensils, clothing, etc., hardly seem necessary. For practical purposes it will be sufficient that the patient be confined to a room that only the attendants are permitted to enter, and the ventilation of which will, so far as possible, prevent the dissemination of its atmosphere through the house.

Hygiene and Diet.—The patient should be put to bed and kept in bed for two or three days. In case the fever runs high, he should not be allowed to leave bed until his evening temperature is reduced to below 100° F., nor to go out of the house until the evening temperature has remained normal for at least two days. There will be less danger of complications if this regimen is followed out.

The severity of the disease and the danger of serious complications should be fully impressed upon the patient so that he may readily acquiesce in these methods. He should be told that if he does not follow the physician's advice implicitly he does so at his own risk.

The diet should be bland and easily digested, but not necessarily restricted, except for special indications. The food from the first should be highly digestible and given in small portions at frequent intervals, with digestants. It is best to give food every four hours. This should consist of underdone beef, fish, oysters, chicken, turkey, lamb, venison, quail, squab, rabbit (broiled, roasted or stewed), stewed terrapin or turtle together with rice, which are well suited for the four-hour meal, while at the two-hour intervals may be given a bowl of

clam or other broth, rice, cold consommé, junket, freshly pressed fruit juices, raw eggs, coffee, tea, chocolate or cocoa made with milk instead of water. A dose of one of the papaya derivatives, or of acid and pepsin, is usually required at each feeding.

The mouth and nasal passages should be frequently sprayed or washed with an antiseptic solution. This disinfection of the catarrhal discharges, particularly the bronchial, is necessary.

In considering the treatment of the attack, the cases may be grouped under three heads. First, mild or rudimentary forms, second, cases of medium severity; third, severe forms. In addition there is the treatment of the stage of convalescence as well as of possible complications.

The Mild Cases.—In mild forms little save hygienic management is necessary. The patient should be put to bed, be given a light, nutritious diet consisting of milk, eggs, rice puddings, vegetables, fruit juice, cooling drinks (or hot ones if he prefers them), effervescent mineral waters such as vichy, also lemonade or orangeade, if the patient likes either of these. Alkaline drinks are quite as essential in influenza as in many other infectious diseases.

The intestinal canal should be cleaned out with a few doses of calomel and podophyllin followed by saline laxative, avoiding, however, extreme purgation, cleansing the bowels, nevertheless, quite thoroughly and keeping them open with salines. In the mild cases stimulants may not be necessary, although in the majority it is well to give strychnine or brucine in appropriate dosage; if there is much headache, a few moderate doses of acetanilid will serve to relieve it and to reduce the temperature. Monobromated camphor and zinc valerianate often will quiet the headache, and these are much safer than any preparation of acetanilid. To overcome the languor and debility which often are very marked there is nothing more successful than strychnine.

The general management of cases of medium severity is the same as in mild cases. While in these cases the patient does not have much desire for food, he should

be urged to eat with regularity. He should receive some light liquid nutritious diet every three hours, during the febrile period. He should not be allowed to leave his bed until convalescence is well advanced.

The medicinal treatment, for the most part, is simple and symptomatic. There is a marked absence of tone throughout the body, a degree of debility out of proportion to the other symptoms present, which will require more or less tonic treatment. There is also a good deal of muscular pain. The profound depression of the vital forces, the tendency to death, the enervation of all the faculties, mental and physical, may be said to constitute the fundamental characteristics of all epidemics of influenza. These symptoms are not so pronounced in cases of medium severity as in the more severe ones, but they are characteristic of all forms of influenza.

For this condition of lowered vital force and depression there is no remedy to be found among the nerve stimulants equal to strychnine, as it directly combats the atonia. It should be given to produce tonicity and repeated sufficiently often to retain the tone required. The arsenate is usually preferable.

In many cases of influenza, characterized by profound depression, except for alcoholics, I like brucine, believing that it is less prone to exhaust the nervous irritability, while acting more quickly than strychnine. Here let me say that there is a marvelous diversity in these cases, for some will require as much as 1-20 grain of strychnine to produce tonicity, while others respond quickly to 1-67 grain of brucine, which is a much weaker alkaloid. It is important to get the effect with the smallest dose possible, thus avoiding exhaustion or irritability.

When there is a demand for a weaker and less dangerous agent, one that may safely be put in the hands of children or ignorant people, berberine is indicated. This is a toner, an appetizer, and is well suited to convalescents. All of these should be given in watery solution to assure their full effect upon the respiratory nerves.

Neuralgic Pains.—If neuralgic pains persist or recur periodically, the quinine salts

should be selected, especially the arsenate. Atropine is required when profuse sweating with headache or neuralgic pains are present. If the mydriatic dries the mouth unpleasantly, or affects the head, agaricin may be substituted in doses up to 1 grain.

Cocaine is especially indicated in nervous apprehension, and when this causes insomnia, when fear of death is a prominent symptom, cocaine and the valerianates, with free purgation, are indicated.

The bromides are useful in early headaches, also for insomnia, delirium of debility, restlessness. Quinine, Dover's powder and camphor are also of great use to relieve the neuralgia and myalgia.

If the pain be so intense as not to be relieved by the internal administration of any of these drugs, it may be necessary to administer morphine subcutaneously. Aspirin is also of great value to relieve the muscular pains, at the same time reducing the temperature.

For the Fever a combination of aconitine, strychnine-arsenate and digitalin will usually suffice, and by equalizing the circulation these remedies may aid in ameliorating the pain. It may be necessary sometimes to resort to some of the synthetic antipyretics, of which phenacetin is the safest.

If the ataxic type of fever be present, the temperature may fall enormously, with symptoms of collapse, when antipyretics are given, even in quite small doses. In that case it is well to give monobromated camphor and zinc valerianate. The latter also aid in controlling the insomnia which is so often a troublesome symptom. Sleeplessness may, however, demand other and more potent treatment, such as sulphonal, veronal, etc. Should the temperature reach 103 degrees, cool sponge-baths may safely be given at intervals of two or three hours.

The Local Catarrhal Conditions, such as coryza, laryngeal and bronchial irritation, bronchitis, etc., must be treated according to the special indications presented in individual cases. In atonic conditions of the respiratory tract, with free secretion and diminished sensibility, sanguinarine is

an efficient remedy, stimulating the mucous membrane and causing freer coughing. When the cough is dry and irritating at the beginning of the attack, emetine will favor a freer secretion and lessen the irritability. This same drug may serve a good purpose also when patients are definitely determined to go outdoors too soon, for we must remember that no small portion of the deaths from influenza occur among those who prematurely leave the house and take cold.

As the acute symptoms subside, a very irritating cough baffling treatment often remains. Morphine and codeine check it, and lobelin may relieve if the membranes are dry, while for bronchorrhea we may select eucalyptol, menthol, myrtol, thymol, or myrrhic acid.

A very peculiar and aggravating catarrhal bronchitis often follows influenza. There is usually very little elevation of the temperature—a degree or so at night—but there is cough and a peculiar sound at inspiration, made by the flapping apart of the agglutinated air-cells. This noise shifts from one part of the lung to the other under the influence of gravity, and it often taxes the skill and patience of the physician exceedingly. My own experience has been that it yields best to sanguinarine nitrate and strychnine arsenate. Hyoscyamine may be added if there is much irritation.

An excellent cough combination, particularly adapted to that class of cases in which there is a marked tendency to purulent degeneration of the mucous secretion is morphine hydrochloride, gr. 1-200; pilocarpine hydrochloride, gr. 1-200; calcium sulphide, gr. 1-40.

Burggraave gives calcium sulphide for the infective principle and to facilitate expectoration, aconitine and veratrine for violent continuous fever, and quinine arsenate or hydroferrocyanide for the periodical fever.

Castro outlines his method of treatment as follows: The symptoms indicate a toxic condition. Excellent results are obtained from quinine, indicated as the dominant. Quinine hydroferrocyanide also soothes respiratory irritation better than opiates. The intolerable headaches with photophobia,

red conjunctiva, ringing ears, also show cerebral congestion and are controlled by aconitine, which moreover moderates the fever and slows the pulse. Give 1-6 grain every quarter hour or as needed. The bronchitic form with dry cough demands calcium sulphide, 1-2 grain every hour, with 3-67 grain of codeine until a soothing effect has been secured. For the congestion give digitalin, 1-67 grain, every hour until the heart action is regular. For the prostration, strychnine arsenate to secure complete resolution; in the old and very feeble, strychnine hypophosphite, grain 1-134 to grain 2-134 every two hours. As a lung tonic and for reducing cough, 2-67 grain of apomorphine every two hours. For anorexia, sparteine and sodium arsenate, a granule each four to six times daily.

Always give the dominants in addition to the variants throughout, even giving the former every quarter hour for a long time and with the exclusion of the variants if need be.

In the Gastrointestinal Form of Influenza, Castro gives the saline laxative to clear the alimentary tract, followed by morphine hydrochloride, in small doses every hour, or if not well borne, he substitutes brucine in the same number. In many cases there is a tendency to chronic diarrhea, the relaxation especially manifesting itself in the intestinal mucosa. If in the stomach, the oxide of zinc is the remedy; if in the bowels, hydrastine. The latter is a dryer, the checker of mucus. It is often combined with berberine to advantage. Indeed this is the drug to be preferred.

With the foregoing, we rank physostigmine. It is a tonic to the bowels and a pain-reliever as well. The indications for its use are frequently met with in influenza. The severe pain demanding anodynes found in conjunction with intestinal atony are among the most frequent pathologic combinations confronting us. It is usually enough to give 1-2 milligram of the physostigmine, repeated every four hours, but I have given as high as three times this quantity at a dose. It is necessary to note carefully the condition of the kidneys before

employing this drug, since, if elimination be impaired, toxic symptoms may follow the administration of even moderate doses.

In the gastrointestinal disorder I give a few doses of saline laxative followed up by the sulphocarbolates every two hours. For the fever nothing answers so well as aconitine, digitalin and strychnine arsenate, as the tendency to debility is present from the first and the unguarded antipyretics are too liable to induce sudden and alarming collapse. For the pulmonary symptoms, the violent headache and other pains, this triad has answered well in combination with hyoscyamine and caffeine valerianate, to be taken in small doses every quarter to half hour until relief.

Gastric irritability has been promptly relieved by silver oxide and cerium oxalate.

Delirium is quickly controlled by hyoscyne, a granule every ten minutes till effect.

As soon as the fever has fallen, the pulmonary symptoms become prominent; sometimes the dry, irritating cough remains, when the zinc and codeine tablet does nicely, followed by malto-nervine, which has done me good service for years.

Bronchorrhea.—Many times cases degenerate into a troublesome bronchorrhea with profuse sputa and evidence of deficient vitality in the pulmonary tissues. Here I have combined sanguinarine and cubebin with much benefit. In all cases the patient does well if left upon nuclein, strychnine arsenate and capsicin, every half to one hour until effect, then enough to maintain this. Some cases require large quantities, but it should be given in small and frequent doses, otherwise the irritability is exhaustive and sudden collapse or toxic symptoms ensue. Iron and alcohol seem to be useless. Hydrastine appears to restrain the profuse sweating better than atropine. Of course the feeding is by small and frequent quantities of rich, easily digested foods.

The synthetic antipyretics are too depressing for the cases I am now seeing, but the saline laxative, intestinal antiseptics and triads do all that is claimed for them.

Relief of Pain.—Chloroform liniments, chloral-camphor, and belladonna plaster

are useful locally. *Cannabis indica* in doses of 1 centigram (1-6 grain) of a good extract sometimes gives great relief, especially when there is gastrointestinal pain.

If the coal-tar derivatives are employed they should only be given in small doses. The zinc or caffeine valerianates are invaluable in ataxic febrile states. For the cough I prefer inhalations of thymol iodide, in a petrolatum spray; only rarely I give small doses of codeine, say, 1-2 centigram (gr. 1-12). But for the irritative laryngeal cough of convalescence the best remedy is yerba santa given to effect. Counterirritation over the right pneumogastric nerve in the neck usually moderates the cough. Complications and sequels require their own treatment, the tendency to debility and collapse being ever borne in mind.

Now to recapitulate briefly, I wish to reiterate some remarks relative to the treatment of influenza which involves the upper respiratory tract. Many of the patients present themselves with intense headaches, backaches, slight fever, a sense of great exhaustion and mental depression, tremulous tongue which may or may not be coated and indented, suffused eyes, flushed cheeks, loss of appetite, and sometimes nausea. In some cases there are sneezing, nasal stenosis and hydrorrhea. The turbinate bodies are red, sensitive, and swelled to such a degree as to occlude a view of the deeper portions of the nasal fossa, and the inflammation may invade the eustachian tubes and middle ear.

This Catarrhal Condition frequently extends so as to involve the throat and bronchial tubes. Then the columns of the fauces appear intensely red and the tonsils may become inflamed or ulcerated. Occasionally the epiglottis and the interior of the larynx may assume a hyperemic appearance. Some of these cases present a mild inflammatory action in the mucous membrane lining of the larynx with small zones of hyperemia of the vocal cords, and the trachea and bronchia are involved to the extent of a mild catarrhal inflammation. These attacks are best managed by putting the patient to bed as the first step to insure

success in the treatment and to prevent the disease from terminating in something worse—pneumonia.

When the bowels are constipated they should be cleared out with a saline laxative. These patients often have a uric-acid diathesis, or as I remarked before, an acidemia; alkalis help to free the blood of this irritant. If a fermentative process is going on in the alimentary canal we need intestinal antiseptics, as well as a depleting of the engorged blood vessels. In the event of considerable fever and headache the defervescents or the dosimetric combinations are indicated. If much headache, the remedies recommended above.

Rheumatic Symptoms.—It is especially necessary to influence any rheumatic symptoms that complicate the attack.

For this reason the salicylates or aspirin along with alkalis are needed. We should not forget that many of our patients are inordinate eaters of meat and sweets, and that the resulting excess of uric acid stored in the body may be set free at such a time and give rise to rheumatic pains and soreness of the throat and muscles of deglutition. Then the alkalis and salicylates act charmingly. It is not an infrequent occurrence to find that the soreness of the throat and especially the pain in swallowing are entirely out of proportion to the amount of inflammation discernible in the pharynx. Then palpation of the muscles of the neck and pressure behind the angle of the lower jaw may reveal great tenderness. These cases call for salicylates, alkalis, and either the defervescent or the dosimetric granules. And don't forget the alkalis!

If the strength is greatly reduced, strychnine arsenate and small doses of quinine may be administered in moderation, provided there is no pathological condition of the ears. We should not forget that quinine and salicylic acid produce a congestion of the middle and internal ears and that a certain proportion of influenza-cases are complicated with ear-lesions which would be aggravated by the administration of such remedies. There are certain alkaloids that will afford the patient speedy and certain relief.

For the Relief of Pain.—While the body is being put in the most favorable condition for the elimination of the poisonous principles that originate the disease, and in the best fortified condition for resisting the onset of the attack, by the measures already detailed, we are able to minimize and abort the attack.

We have found that while the suffering formerly extended over a period of from ten days to three weeks, we are now able to limit the most serious symptoms two or three days. I refer to a combination of morphine, atropine and caffeine, in the proportion of 1-12 grain of morphine with 1-600 grain of atropine, and 1-6 grain of caffeine. The morphine relieves the pain and nervous irritability, suppresses the excessive nasal secretion and stimulates the circulation. The atropine elevates the tone of the blood-vessels, quickens the pulse, decreases all the secretions except the urine, stimulates the respiratory center, counteracts the constipating effects of morphine, while the caffeine stimulates the nervous centers of the kidneys and diminishes the tendency of the morphine to provoke nausea.

Danger of Depression.—In the very severe forms of influenza the general management is similar to that of the one already recommended, save that we should be careful about giving any drug which exerts a depressing effect, as the cardiac as well as the respiratory forces must be conserved. Should there be sudden cardiac failure it must be met promptly with the various forms of stimulants, including strychnine, digitalin and cardiac tonics. Aromatic spirit of ammonia is usually borne well and may be administered with advantage. Strychnine must be given in full doses, hypodermic lly, every third or fourth hour. The various inflammatory complications that may arise must be treated as under other circumstances.

Complications and Sequels are frequent and numerous; every organ and tissue of the body may become affected with the influenza or its bacilli. Many complications cannot be prevented by even the greatest care and the best treatment. Some, however, are due to carelessness, over-

exertion and secondary infection, all of which must be guarded against. Forchheimer says that the number and intensity of the sequelae of influenza are altogether out of proportion to the intensity of the attack. A severe attack is always, a mild attack usually, followed by some sequel. The most common is debility, frequently extreme and of great duration.

Prophylactic measures are of great importance. Strychnine, cinchona preparations, iron, are all indicated in the proper cases. Above all, adequate feeding, if necessary overfeeding, should be insisted upon. Physical and psychical rest are of great importance. Care must be taken not to suggest invalidism. The sequelae on the part of the nervous system are very common. They are found affecting the brain, the spinal cord and the peripheral nerves, due both to anatomical and functional causes. The frequency of neurasthenia and suicide after influenza have been frequently commented upon. It would be interesting to know whether neurasthenia or psychoses could be prevented by proper treatment, as both occur where there is a temporary or permanent predisposition. Possibly influenza *per se* is to be looked upon as due to a temporary predisposition, but as yet this has not been definitely established.

Under all circumstances, when such predisposition exists, the utmost care must be taken in the treatment of the patient; the early and long-continued use of tonics, the careful watching of the food in quantity and quality, the enforcement of a long absence from all occupation and exertion, have in some instances seemed to be beneficial. In more than one instance I have been able to prevent an attack of neurasthenia in a patient who had become liable, the result of his having suffered from neurasthenia after a previous attack. Nearly all existing diseases are made worse by influenza, so that a patient with cardiac disease, nephritis, or disease of the respiratory apparatus should be especially watched as to the already existing affections.

Convalescence.—In all grades of disease the convalescence from influenza de-

mands most rigid supervision and the greatest injuries to patients of this kind come from going out too soon. Usually the temperature is subnormal for several days, due to the weakness of the patient, and so long as this condition remains the patient is highly susceptible to a chill. Therefore it is a good rule not to allow exposure to external changes of temperature until the temperature has been normal for several days.

The diet should now be more liberal, and a tonic, preferably the triple arsenates with nuclein, may be administered and continued until restoration of the patient's health has taken place. In every way possible exposure to reinfection during the period of convalescence should be avoided.

GEORGE F. BUTLER.

Chicago, Ill.

THE ALKALOIDAL TREATMENT OF INFLUENZA

In influenza we have a two-fold indication, to combat the specific cause of the malady, and to meet the often exceedingly dolorous symptoms that demand relief at the quickest possible rate. We therefore consider this disease from the classic standpoint of the dominant and the variant treatment.

Against the Bacillus we may oppose but two remedies directly, namely, calcium sulphide to destroy the microbes, and nuclein to reinforce the leukocytes. Both of these agents are still in the experimental stage, although many who have employed them will resent this statement and exclaim that with them they are fully established. I refer here, however, to the body of our profession. In practice, give a centigram of the sulphide and repeat it every half hour until saturation is denoted by the sulphurous odor of the perspiration; then give it every hour or two to sustain this condition, until the germs are dead. Saturation may be safely maintained for six weeks if necessary; and those who have used this method most freely are loudest in their asseverations that no microbe can possibly withstand the treatment nearly this long. The calcium sulphide is harmless and does not interfere with any

other treatment. But be sure that your sulphide is of the full U. S. P. strength, which it rarely is. Further, do not administer it during the period of acid digestion.

Nuclein occupies similar ground—those who have used it most freely believe in it most strenuously. It also is harmless. Give 10 minims as a dose, up to six times a day, hypodermically or under the tongue; or if you want to be original give it intravenously, half a dram a day, well diluted. One thing is certain: it increases the number and the activity of the leukocytes, and if these be also phagocytes there is reason for the treatment.

Debility.—Only the prime necessity of opposing the cause of any malady excuses us in placing debility in the rank of the variant indications, because it is invariably present in every form and case of influenza. Moreover it is a universal weakness, extending to every vital function. We therefore oppose to it the universal incitor of vital function, strychnine. We select the arsenate, because arsenic has the power of imparting to the endangered red blood-corpuscles a certain degree of resisting power against the invading microorganisms; it also is a vital incitor of no mean power; it promotes fatty degeneration, and acting on the newly forming and unorganized products of disease, tends to liquefy them, and to favor their quick absorption, hence it shortens the period of convalescence.

But here comes in a clinical observation of such vital import that we must pause and give it the fullest emphasis: the vitality is universally depressed in influenza, and extends to the reaction against or with drugs. So only the smallest doses of the strychnine arsenate should be administered, and these must be closely watched, lest we exhaust the little vitality remaining, and have the depression increased, instead of arousing a reaction. I have witnessed alarming depression induced by strychnine in doses of one milligram. The dose of 1-2 milligram is here a maximum instead of a minimum. Better give 1-4 milligram (1-250 grain) only.

With many patients—children, women and weakly men—it is better to employ, in place

of strychnine, the milder brucine, in doses of 1-2 milligram, corresponding to about 1-500 grain of strychnine arsenate. These small doses may be repeated very frequently, since the alkaloids are very quickly absorbed and manifest their activity within five minutes or less on a comparatively empty stomach. The doses are, as an average, to be repeated every fifteen minutes until we have secured all the vital reaction we want, or all that the patient can afford; then repeat often enough to sustain this effect. Use these remedies recklessly, and you may quickly get into difficulty; employ them skillfully, and you soon perceive why old Burggraevae termed strychnine arsenate his "war-horse."

Relief of Pain.—The next indication will be strenuously designated by the patient as the primary and most imperative one—the relief of pain. The intensity of the influenzal pains is diagnostic. Any of the anodynes may give relief, and many a good clinician pins his faith on some combination in which the coal-tar derivatives hold first place. But the overpowering weakness indicates the necessity of selecting an anodyne that does not debilitate—and here is where we have use for hyoscyamine. The same rule as to minute dosage is here urgent: give 1-500 grain of hyoscyamine with each dose of strychnine, but quit the moment the patient's mouth begins to feel dry.

Fever—who has not seen the temperature tumble, under a grain or two of acetanilid, into a collapse that has raised the doctor's hair in fright? Here we rely on aconitine, and give 1-2 milligram, fearlessly, every quarter or half hour until the pulse and temperature are to our liking. If the heart shows any disposition to weaken we can join with each dose one milligram of digitalin, thus enhancing the antipyretic effect, steadying the heart, and restoring a little needed tension to the blood-vessels. Since the full daily dose of amorphous aconitine is 5-6 grain, and of water-soluble digitalin 2 grains, we are still employing here our minute-dose method. But make no mistake as to the efficiency. I am reminded of a

former patient whose husband badly injured his one only coat, and who mended it with hair from her own head so neatly that no sign of the lesion was apparent. Just so nice work in medicine is not always apparent by the violence of the drug-action.

Elimination.—The doctor who has a superstitious dread of veratrine will open his eyes wide when I recommend it in influenza; but there is reason, and there is no peril.

Veratrine is the best of eliminants. Give it in doses of 1-2 milligram, repeated every quarter hour in high fevers, less frequently in milder forms. Besides, these small doses aid the heart by relaxing the coronary arteries and allowing a better supply of nutritive blood to enter; they also stimulate the emunctories, especially the liver and the skin, and thus relieve the system of much depressing toxic material. But little veratrine is needed, as a rule, if we clear the bowel by a daily dose of a laxative saline and regulate the diet properly. Digitalin is the best diuretic here, since the vascular tension is usually low and the renal arteries need an increase of the cardiac impulse rather than relaxation.

It should not be forgotten that in small doses veratrine increases muscular force. For this we rely, however, on caffeine, employing the valerianate in doses of a milligram every quarter or half hour. This also sedates many nervous conditions, and has no slight anodyne power, besides increasing the heart force and renal elimination. The ataxic group of symptoms is peculiarly amenable to this remedy.

The other indications in influenza are innumerable, in view of the protean nature of its manifestations. Many times we find reason for gelseminine, for its rare combination of powers, being analgesic, antipyretic, a spinal and cerebral sedative, with a minimum of vascular sedation. The properties of cicutine hydrobromide as a spinal sedative and anodyne are also frequently in demand.

The Respiratory Form of the disease calls for emetine to stimulate secretion and sedate sensation in the respiratory tract,

used in very small doses still—half a milligram of the pure alkaloid being a full dose, more often to be divided than increased. Similar doses of codeine may be given to quiet an irritative cough, a milligram granule being allowed to dissolve on the tongue occasionally.

The digestive faculties may be enhanced by a milligram of quassin, taken in solution to affect the gustatory nerves, before meals; a little hydrochloric acid and pepsin, or at other times papayotin and soda, aid in digesting more food than would be managed otherwise, and with that much more strength is added.

Beware of cold and of cold baths. Hot salt-baths and rubs are useful. Rest is imperative, and the more absolute the better.

During convalescence quinine hydroferrocyanide is the best tonic, a centigram every two hours being an average dose. Eschew alcoholics of every description, then and forever. The debility of influenza is peculiarly liable to beget chronic alcoholism if one once commences its use.

When an intestinal antiseptic is needed the most appropriate is calcium sulphocarbolate, as the reconstructive lime is always needed. Give enough, and this may mean a dram a day.

WILLIAM F. WAUGH.

Chicago, Ill.

PHYSIOTHERAPY IN THE TREATMENT OF INFLUENZA

In the treatment of influenza the one characteristic fact to be borne in mind is the absence of a well-defined type or clinical picture. Every case seems to be peculiar to itself. Only two features seem to be common to all cases of grip, to wit: the tendency toward localized congestions (inflammations) and more especially the great debility which sometimes accompanies and always follows an attack. The therapeutic methods to be employed in the treatment of the disease will have to be adapted to the clinical indications suggested above.

The Importance of an Active Skin.—The attack in the majority of instances is

ushered in tempestuously by a chill, followed by fever. It is excellent practice to begin active treatment by application of some thermo- or hydrotherapeutic measure by which active elimination through the skin can be effected. A steam- or vapor-bath, a dry hot-pack, an electric-light-bath, a cold moist-pack, or even a full hot immersion will answer the purpose. On general principles the dry and nonreactive applications are better because they are safer. The electric-light-bath and the hot dry-pack are probably better than the other methods suggested above. The application should be pushed to the point of tolerance.

A copious diaphoresis should be induced and kept up for from fifteen to thirty minutes, depending on the tolerance of each individual patient. The sweating process should be followed by a dry-rub. The cold-rub is not unconditionally to be recommended. The object is to maintain the skin in a condition of increased functional activity and corresponding active congestion. In proportion to the success we have in keeping up cutaneous activity, we shall be able to lessen the liability of internal congestions.

It is a very good plan to heed the advice of Priessnitz who, after giving a general sweat, applied a continuous dry-rub to the arms and legs and finally to the back, but more especially to the legs. His object was to intensify cutaneous activity in those regions which are furthest removed from the respiratory organs where congestions are most likely to occur. These skin-stimulating procedures should be applied daily and pushed to the point of tolerance. Massage, properly applied, especially in the form of petrissage and effleurage, is a very useful adjunct.

In young and vigorous adults the therapy suggested is uniformly safe and useful. Where there is a fatty heart, or some organic disease, especially of the heart or kidneys, and in advanced cases of pulmonary tuberculosis, the physician should individualize and proceed with caution and circumspection. The employment of reactive methods is not without risk in these

conditions. For similar reasons the use of a cold-rub after a sweat is somewhat hazardous.

Muscular and Neuralgic Pains.—If the pains are steady and localized, massage will do a great deal of good. Severe headache, insomnia, functional brain-symptoms are often successfully combated by massage of the head (effleurage). Pressure over the occiput frequently is very serviceable in relieving headache. Pains in the back and in the extremities are likewise amenable to massage. The vibrator can be brought successfully into play. The vibrations should be rapid and fine and followed by massage. Exposure of an aching area to blue light frequently is followed by prompt relief. The galvanic current is useful (positive pole to aching spot, negative pole at some distance). The sinusoidal current applied by means of a massage-roller often works wonders in giving relief. Torticollis should be met by massage of the muscles of the neck. The pain of an incipient tonsillitis usually yields to a Priessnitz compress applied to the neck.

Catarrhal Symptoms.—If the eyes or the air-passages are attacked, "derivation" to the lower extremities should be persistently practised. This is especially imperative when the lungs show signs of irritation. Cold compresses, especially to the chest are of very questionable utility, although some authorities seem to speak well of them. The great objection to a continuous cold application is the possibility of cutaneous vasomotor paralysis, which, for reasons given on a number of previous occasions, is to be avoided. When there is great irritability of the eyes (photophobia, etc.), these should be protected against the chemical rays of light by dark-red glasses. In mild conditions of this kind blue glasses will answer the purpose. The discharges from inflamed mucous membranes should be disinfected and destroyed.

Gastrointestinal Symptoms.—The dietetic regimen should tend in the direction of preventing or alleviating symptoms on the part of the stomach and bowels. Liquid or semisolid food, largely carbohydrate and

sparingly given, should be the rule. The administration of stimulants, especially of the alcoholic variety, should not be unconditionally insisted upon as a matter of routine. In persons who have never been in the habit of taking alcoholic stimulants the administration of the latter is unjustifiable unless there is a distinct indication in a weakened heart. In persons with whom "booze-fighting" proclivities have become a second nature alcohol cannot be dispensed with. In giving dietetic directions it must be borne in mind that the gastric mucosa should be given as much rest as possible. This means frequent feeding, but small quantities at a time.

Colon irrigation is an excellent auxiliary measure, provided the patient is not too much weakened by the physical effort involved in the proper application of this method. The daily application of a hot-pack to the abdominal wall is not merely a very valuable palliative measure, but seems to have a distinctly prophylactic action in forestalling gastrointestinal irritation.

Nervous Symptoms.—In 75 percent of cases the nervous symptoms predominate in one form or another, some of which have already been referred to. During an attack of grip very often the seed of a subsequent chronic malady, not infrequently of the nervous system, is planted.

Depending on the character of the symptom or symptoms, the treatment will have to be systematized. If an autointoxication is the causative factor, eliminative measures are indicated. This is the case in the majority of instances. If the symptom is due to a congestion or inflammation, "derivation" should be practised. The indications for and technic of this greatest of all hydiatic measures we have had frequent occasion to discuss. Many painful conditions of the nerves are considered in the light of a true neuritis, most times, however, erroneously so. Usually they are autotoxic in character and should be treated as such.

Debility and Prostration.—Perhaps the most characteristic symptom of influenza is the extreme weakness which this

disease causes. The degree of weakness is apparently out of all proportion to the general aspect of the individual case. To counteract debility, mild stimulating hydrotherapeutic applications should be made, preferably nonreactive in character. The electric-light-bath is useful for this purpose. Vigorous rubbing of the skin and massage should follow the bath. The cold Kneipp-douche to the spine is effective. It should not be used on patients who are naturally weak. Sometimes it is better to apply an alternating cold and hot douche to the spine. Where practicable, the sun-bath should be resorted to on account of its eminently tonic and invigorating action.

Complications and Sequels.—The most common complication is pneumonia. Its prevention and treatment have previously been discussed in the lesson devoted to "typhoid fever." Occasional complications are inflammatory conditions of the heart and cardiac neuroses.

In the treatment of many cases of cardiac neuroses rapid and fine vibration over the entire precordial region has been found a fine cardiac tonic-sedative. In some cases the high-frequency current, similarly applied, will be found equally effective. The continuous use of the ice-bag over the heart should be discarded.

Sequels are phthisis in predisposed persons, brain-symptoms, from slight headache to acute mania (invariably due to autointoxication and usually amenable to eliminative treatment), insomnia (derivation to the lower extremities to relieve intracerebral blood pressure), lymphatic enlargements (galvanism, cataphoric introduction of iodine, gentle massage to encourage absorption), general weakness (nourishing food, fresh air, sunlight, static breeze, high-frequency currents to body-surface and especially to the spine).

OTTO JUETTNER.

Cincinnati, O.

COMMENTS ON THE LESSON

The student will find, in the preceding considerations on influenza, practically everything he requires in order to recognize the

disease and to manage his cases successfully. For the sake of fixing the most important points more firmly in the mind we have thought well to add a brief résumé of the principal points.

It is a pernicious habit of the laity, all too often concurred in by physicians, to call every little cold, cough or coryza by the specific name of influenza, or grip. The consequence is that people attach too little importance to the disease, expect you to overcome the actual influenza in a few days, and hence are unwilling to take proper precautions. A sample of sputum examined bacteriologically, clears up the diagnosis.

Influenza may manifest itself in various forms which can as a rule be classed under one of the four types generally recognized:

1. Respiratory form.
2. Nervous form.
3. Gastrointestinal form.
4. Febrile or typhoid form.

While the characteristics of one form generally predominate, mixed forms occur.

The indications for treatment may be divided into general and special. The general indications are those governing the treatment of any infectious disease, as well as the symptoms common to all forms of influenza. They are: isolation of the patient as far as possible; cleansing applications to the inflamed mucosæ, and disinfection of the discharges; rest in bed; attention to the severe prostration and to the nutrition.

The special indications vary with the type of the disease and include measures to prevent the complications most to be feared. So we must, for instance, in the respiratory type relieve the pulmonary congestion lest pneumonia occur; in the nervous type meningitis is to be feared; the gastrointestinal type may lead to a fatal debility because the powers of digestion, and still more of assimilation, are curtailed particularly and require careful nursing. In the febrile or typhoid form we must be very sure of our differential diagnosis and will do well to treat the cases on the principles governing the treatment of typhoid.

Iodized calcium should be prescribed in doses of from one to three grains every hour, together with four drops of nuclein, on the first symptom, and be followed up by the proper cleaning out, by intestinal antiseptics, and by confinement to the house. In this manner many an attack may be aborted. If this is no longer possible, a plan of treatment as outlined in the preceding papers will prove of value.

In times of epidemic attention to the *primæ viæ*, and occasional doses of iodized calcium together with the obvious prophylactic measures may act as protectives.

The patient, and still more his family, must be fully impressed with the danger of premature rising and exposure. Many a latent tuberculosis has been aroused to activity by a neglected or insufficiently treated influenza and has developed into phthisis. Convalescents from influenza seem to be peculiarly liable to almost any other bacterial disease and must be confined to bed, the room or at least house until fully restored.

This subject is one which deserves careful consideration, and we hope it will elicit free discussion, through these pages, by our students and others.

Next month we shall take up the subject of pneumonia.

We should have many more students registered in the Postgraduate Course. Many are coming in, but we want thousands more. May we not hope for large accessions to our list, while the year is young. Do not forget that a handsome certificate is awarded to everyone completing a year's work.

We wish particularly to call attention to the review of Dr. Juettner's new book, appearing on another page. This is a splendid work, a masterpiece, and every student in the course (as well as everyone interested in physiotherapy) should have a copy.

Typhoid Delirium.—Dr. A. Graves, Mehama, Alabama, in a very interesting paper gives his method of treating typhoid delirium, as follows:

"Given a case of typhoid delirium, my first attention is directed to elimination. If the mouth and tongue are dry, indicating depressed secretory function, I begin with

minute doses of calomel frequently repeated till the mouth begins to show presence of secretion. Then I follow immediately with tablespoonful doses of castor oil, with 5 drops of turpentine, and repeat every two hours, till stools show evidence of the oil, or till two or three doses are given, then follow this with colonic flushing sufficient to clean the colon. In the meantime cold applications are made to the head and the skin is given a warm sponge-bath, and turpentine stupes to the abdomen. This frequently relieves, and always, in every case, benefits. In the cases not so relieved I use morphine and atropine hypodermically, but not till gelseminine has been tried."

Dr. H. A. Simpson of Afton, Tenn., says regarding typhoid delirium:

"When we follow the 'clean-out' method there is little delirium to treat. Where the delirium is an effect from toxins in the system it is best treated with eliminatives and then the intestinal antiseptics. Where there is delirium from nervous conditions of the patient there is nothing better than morphine. Where there is hyperemia of the brain, cold to the head is indicated. The bromides may be used in delirium with good effect. Where there is much vascular disturbance, gelseminine and cicutine act nicely, as well as other vascular depressants."

The doctor also writes in a personal letter the following:

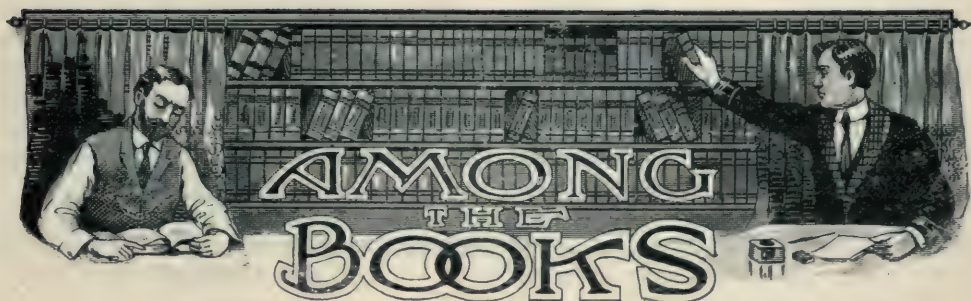
"If you had one of my cases I now have in the same place I now have him, you would hold up your hands and say, 'My God!' This case is in the most unwholesome place for typhoid fever imaginable. This can't be remedied unless you stay there, and stay there you won't. This man had congestion of the lungs, but somehow or other this condition is gone, leaving a simple case of fever. I cleaned him up with calomel and salts, and then gave aconite, belladonna and bryonia for the high temperature, as well as plenty of the sulphocarbolates to disinfect and control the diarrhea. Today his temperature is 99.2° F. at 2 p. m. My treatment now is oil of turpentine and the sulphocarbolates. This condition is good. Diet, milk."

Dr. Fred F. Attix of Lewistown, Montana, always submits excellent papers. He has this to say regarding the treatment of typhoid delirium:

"The delirium of typhoid fever can be avoided by absolute rest, restricted diet, careful and competent nursing and the intelligent use of the 'clean-out, clean-up and keep-clean' technic, aided by the sulphocarbolates. Nervousness can usually be controlled by the valerianates, and headache is frequently relieved by small doses of codeine. Delirium is usually controlled by hyoscine hydrobromide, gr. 1-100. This failing, morphine in small doses is indicated. In alcoholics small doses of whisky are indicated, frequently associated with hyoscine or cicutine hydrobromide, or both. High enemata of normal saline solution will aid elimination by flushing the bowels, kidneys and the skin. Water should be freely given, and sponging and massage are often desirable."

EXAMINATION QUESTIONS

1. What is the final cause of influenza? Give historical data.
2. How can influenza stand in relation to the increased number of suicides, as has been claimed to be the case?
3. How is the influenza-infection spread?
4. Give the principal diagnostic points of influenza, using not more than 150 words.
5. What are the different forms of influenza?
6. Differentiate influenza from common cold?
7. What are the most common sequelæ of influenza?
8. Give briefly the general outline for the treatment of influenza as an infectious disease.
9. What are the complications and how must they be guarded against? How do you treat them?
10. Give briefly the indications for and mode of treatment of influenza with alkaloidal remedies.
11. Give briefly the outline of the treatment of influenza by physiotherapeutic measures.
12. What are, in your opinion, the principal indications for treatment in influenza? How do you meet them? Report one case.



JOHNSON'S "SURGICAL DIAGNOSIS"

Surgical Diagnosis. By Alexander Bryon Johnson, Ph. B., M. D., of Columbia University Medical College. Volume I. Wounds and their diseases, Diseases of the soft parts and of the bones, Tumors, Fractures and dislocations, Syphilis, X-Rays, Head and neck, Thorax and breast, Abdomen in general, Peritoneum and injuries of special abdominal organs. With one colored plate and 257 illustrations in the text. New York and London: D. Appleton & Co. 1909. Price, per volume, \$6.00.

This work is laid out on a broad plan and the author aims at nothing less than exhaustive comprehensiveness, hence two more volumes are to follow. Of these volume II already is in our hands for review, while the third and last one is promised to appear by next fall. The price of this set of three volumes is \$18.00, single volumes not being sold separately.

There is not a country in the world where the mode of life and its activities are so conducive toward producing surgical diseases as is this the United States of America and its outlying dependencies. We will not stop to argue this assertion. Nor is the proposition likely to be disputed that New York City, next to London, is the best place to study surgical diseases. Given a ready mind, studious and penetrative powers of observation such as we believe the author of this big work possesses, and twenty-five years of practice in the city of New York with its incomparable hospitals, there is under the kind divine providence under which we live no reason why such a mag-

nificent work as this one before us should not be produced.

Volume II of the above work treats of: Injuries and diseases of the abdomen and of its contained viscera; the rectum; injuries and diseases of the kidney; the bladder, the prostate, the urethra, the penis, seminal vesicles, scrotum, testis and spermatic cord. With three colored plates and 253 illustrations in text.

BURDICK'S "X-RAY AND HIGH-FREQUENCY IN MEDICINE"

X-Ray and High Frequency in Medicine. By Gordon G. Burdick, M. D. Chicago. The Physical Therapy Library Publishing Company. 1909. Price \$2.75.

"No one can read the volume without having much food for thought." This assertion made by the author in his preface is justified, only a few lines further on, where the importance of exact knowledge of physics for successful x-ray work is touched upon. Physicians are all too apt to take up work requiring special study and preparation, without having devoted the necessary time to these, and the consequence is frequent failure and error, and this leads the author to exclaim: "I am convinced that he (viz. the physician) has not reached the higher ideal demanded by the Divine Spirit of Medicine. He is not the great force in our civilization he should be, and he as an individual is alone to blame."

Food for thought, indeed! Even if the little volume before us did not contain, as it does, the practical results and deductions

therefrom, of the author's long and wide experience, even if it did not present, as it does, an excellent working manual for x-ray and high-frequency work, we should feel constrained to commend it on account of the ethical, philosophical and other discussions which are scattered through the text. The book must be read and studied, to be appreciated. Probably no man in this country is more competent to discuss this branch of therapeutics than Dr. Burdick and his book is certainly a masterpiece, well adapted to the use of the general practitioner.

TWEEDY AND FRENCH'S "MIDWIFERY"

Rotunda Practical Midwifery. By E. Hastings Tweedy, M. D., Master of the Rotunda Hospital, and G. T. French, M. D., late Assistant Master. London, and New York: Henry Frowde. 1908. Price \$6.00.

The Rotunda Hospital of Dublin seems to be a large medical institution, one which gives dignity and authority to medical practice, and the two authors, one now, the other formerly connected with this institution, give evidence that they deservedly held so responsible a position. We can therefore assume that the book before us is a well authorized statement of what is the educated obstetrical practice in Ireland, or perhaps in Great Britain. It will be found to differ in some points from the practice in vogue here, and this gives it especial value for the studious practitioner. The book is indeed thoroughly practical and a reliable handbook for the obstetrician. It contains an appendix of valuable statistical tables and a good index.

BURGESS'S "NEW DISCOVERIES"

New Discoveries in Treatment. Successful Methods to Date. "The Money Crop." Fortune Is Knocking at the Doctor's Door (Dollar Edition). By Dr. W. H. Burgess, author of "The New Field." (Avondale) Chattanooga, Tennessee.

"This little book represents more than a thousand pages of reports and two years of laboratory work. If we set the price too high, you are at liberty to reduce it."

We gave in the preceding the title page in full, not wishing to reduce in the least the author's refreshing originality, for which and for whom the writer of these lines confesses to have a profound respect. The pamphlet has 32 pages of 7½ by 5½ inches of 9-point type, an index, and is well bound.

BUCHANAN'S "THE BLOOD IN HEALTH AND DISEASE"

The Blood in Health and Disease. By R. J. M. Buchanan, M. D., of the University of Liverpool. London and New York: Henry Frowde, Oxford University Press. 1909. Price \$4.50.

This book is devoted to the study of the blood in a special and thorough manner. The volume of about 300 pages is illustrated with 20 plates of exquisite workmanship representing phases of the blood not usually met with in textbooks. The author is generous in his instructions for the preparation of specimens for microscopic examinations. The book should have a place in every physiologic and pathologic laboratory.

SINCLAIR AND MICHEL'S "GOOD HEALTH"

Good Health and How We Won It. By Upton Sinclair and Michael Williams. With 16 full-page illustrations from photographs. New York: Frederick A. Stokes Company. 1909. Price \$1.20.

This book claims to be *the best* on the subject of proper living. Its claims are not very modest. This book outlines "this new health knowledge [which] has been amassed by many workers and, as in all cases of new knowledge, *there is much chaff with the grain.*" (Italics ours.)

The authors are thorough vegetarians and find the main cause of the destruction of nations to be meat eating, saying: "History has yet to record for us the tale of a nation passing safely through civilization, of a nation which has not been eventually destroyed by the civilization it so arduously won." Frederick the Great, who was a disciple of Voltaire, once badgered his court

chaplain about Christianity and demanded the proof of its truth to be given in a single sentence, and at once! "In one word, Your Majesty," replied the doughty parson—"Jews." This single word will also do for all vegetarians and new-thought radicals. The book points to a phase in the general pretentiousness of the army of reformers, and cannot well be spared in the study of contemporaneous history.

LOCKWOOD'S "ANTISEPTIC SURGERY"

Antiseptic Surgery. By Charles Barrett Lockwood, Surgeon to St. Bartholomew's Hospital. Third Edition. London and New York: Henry Frowde, Oxford University Press. 1909. Price \$1.50.

This is a most excellent handbook for the general and special practitioner in surgery. It is reliable, for it comes from a place where the best surgery in the world is performed, and for that reason also it is up-to-date. Its foot-notes giving sources of literature are decidedly valuable to the student. Its hand size and flexible binding makes it convenient for the physician's hand-satchel.

EBERHART'S "PRACTICAL X-RAY THERAPY"

Practical X-Ray Therapy. By Noble M. Eberhart, A. M., M. S., M. D. Second edition, revised and enlarged. Chicago. New Medicine Publishing Company. 1909. Price \$1.50.

The second edition of Dr. Eberhart's excellent little manual on x-ray therapy has become necessary only two years after the first appearance of the work. This is in itself a proof of its value and a matter for congratulation. The present edition has been thoroughly revised and much new matter added, and it may be said to present the latest acquirements of our studies concerning the application of Roentgen rays to pathological conditions, in concise and very readable form.

The author announces that he is desirous of receiving clinical reports, for use in future editions. We urge every reader who is in-

terested in this subject, to procure a copy of this book. It is indeed excellent.

THE CAUSE AND PREVENTION OF CONSUMPTION

The Illinois State Board of Health has issued its eight revised edition of its Bulletin (September, 1909) on The Cause and Prevention of Consumption. This bulletin needs no commendation. Its excellency has already sufficiently been pointed out in many places. The circular may be obtained by addressing the Secretary of the State Board of Health in Springfield.

JUETTNER'S "PHYSICAL THERAPEUTIC METHODS"

Physical Therapeutic Methods. A Handbook of Drugless Practice. By Otto Juettner, M. D., Ph. D. Cincinnati: Harvey Publishing Company. 1910. Price \$5.00.

In his latest contribution to medical literature Dr. Juettner has returned from the enticing by-paths, into which his historical researches ("Daniel Drake and His Followers," Cincinnati, 1909) had led him, and he presents us now with what he calls a system of drugless practice. That the book is timely is vindicated in the foreword, in which the author properly claims it to be a prerogative of the *educated* physician to employ the physical methods of treatment, which have, all too long, been left for the exploitation of the public by the charlatan.

After three chapters devoted to the general consideration of drugless treatment of disease, of hygiene, diet, etc., the author discusses successively hydrotherapy, massage, electricity, the chapters dealing with the latter being preceded by one on psychotherapy. The latter, although not strictly speaking a part of physical therapeutics, undoubtedly must be considered in connection with it.

The list of diseases in which Dr. Juettner claims one or the other of the methods described to be of value, is along one and includes over 150 different affections. Dr. Juettner needs no introduction to readers

of CLINICAL MEDICINE, since his ideas and methods have been presented from month to month in the Post-Graduate section. His style is a fascinating one and his methods are of the practical kind which appeals to members of "the family."

The book is well written, beautifully printed and bound and freely illustrated. We can conscientiously recommend its study. Indeed, we hardly see how any man who has read our journal for the last two years can "hold back" from its immediate purchase.

HAAB'S "OPHTHALMOSCOPY"

Atlas and Epitome of Ophthalmoscopy and Ophthalmoscopic Diagnosis. By O. Haab, M. D., of Zürich. Second American Edition from the Fifth Revised and Enlarged German Edition. Edited by G. E. De Schweinitz, A.M., M. D., of the University of Pennsylvania. With 152 colored lithographic illustrations. Philadelphia and London: W. B. Saunders Company. 1909. Price \$3.00, net.

This volume is an indispensable companion volume to the "Atlas of the External Diseases of the Eye" by the same author. Excellency both of text and illustrations remain the characteristics of every single volume of the fourteen volumes of this series which it has been our pleasure to review within these last ten years. It is gratifying to see that it pays to serve the profession well as these volumes do.

WHITELOCKE'S "SPRAINS"

Sprains and Allied Injuries of the Joints. By R. H. Whitelocke, M. D., Lecturer in Surgery at Oxford University. London and New York: Henry Frowde, Oxford University Press. 1909. Price \$3.00.

Everything has its fate, and diseases and injuries are no exceptions to this rule, and so we do not meet with any monograph on sprains and with but meager accounts of these troublesome lesions in works on surgery. The book before us fills this unusual void in medical literature and fills it

most gratifyingly, sufficiently so as to make of itself a present and future classic. The author is endowed with a master-mind and he has devoted eighteen years' special study to these injuries, enjoying, as he did, unusual opportunities. The book is liberally illustrated.

"ANNALS OF SURGERY"

With the December number the *Annals of Surgery* completes the fiftieth volume of its publication and the twenty-fifth year of its existence. The number before us is a Jubilee-number indeed, containing almost 400 pages of reading matter by many well-known contributors. We congratulate the *Annals* on the occasion of its anniversary and wish its editors and publishers continued success.

BEREAN'S "DIVINE HEALING"

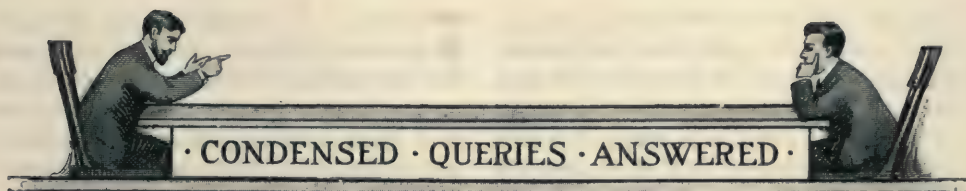
Divine Healing Under the Lens. By A. Berean, New York: Charles C. Cook. 1906. Price cloth, 50 cents; paper cover, 25 cents.

An excellent little book full of good logical answers to the unreasonable, unfair and fanatical claims of the brood of self-styled "divine healers," and this from a strictly orthodox Christian standpoint. Many a young physician, in addition to the usual troubles besetting a physician, is troubled also with these influential fanatics. I recommend to such the reading of this little book for self-confirmation and for aiding him in the refutation of these false claims.

"ESSENTIALS OF MEDICAL CHEMISTRY"

Essentials of Medical Chemistry. By Lawrence Wolff, M. D. The Seventh Edition by A. F. Witmer, Ph.G., M. D. Philadelphia and London: W. B. Saunders Company. 1908. Price \$1.00.

This is one of those books, especially prepared for students' use for study and for preparing for examinations, the uniform excellence of which dispenses us from further commenting upon its advantages.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5533.—“Tuberculosis.” W. J. E., California, desires to know the name of a hypodermic treatment for tuberculosis which, he says, he understands is placed upon the market by a firm “east of the Rockies.”

We should be very much pleased to get this address ourselves. Perhaps some subscriber can give it. A physician in Michigan is injecting large doses of salicylic acid in an unknown vehicle with, we believe, a certain degree of success, but to the best of our knowledge and belief this treatment is not yet offered the profession. Of course there are any number of so-called treatments calling for the hypodermic use of one or more remedies. Nuclein is almost invariably exhibited hypodermically and various antiseptic solutions are employed in the same way.

QUERY 5534.—“Ulcus Gastrica.” J. A. H., Illinois, has a patient, a man aged 55, who presents the following symptoms: “One or two hours after the midday meal he has a gnawing, burning pain in the epigastrium. Some days it is very annoying, on others is not felt at all. These symptoms have been felt for more than a year but seemed to be getting worse the last few months. Feels no pain until about 2 or 3 o'clock in the afternoon. Fifteen minutes after lying down at night all symptoms disappear. He has lost about 10 pounds in weight in the past six months. Patient says he feels as though there were a sore spot in his stomach. There is pus in the stomach-contents. How do you account for it?”

It is quite probable that you have to deal with gastric ulcer, although, of course, it is impossible to speak positively. Pus is not infrequently present in cases of active ulceration, streptococcic infection occurring. In phlegmonous gastritis pus is abundant. Streptococci or bacilli coli may be present. This condition is not common, but males are more frequently affected than females. In circumscribed phlegmonous pustules pain may or may not be severe; the temperature may remain normal for prolonged periods.

You should have specimens of the feces and urine examined in a case of this kind; only so can you get a clear idea of conditions. Give weight of patient; describe his habits, especially as to use of coffee, alcohol, tobacco, etc.; give occupation, also family history; outline diagrammatically the area of hepatic dulness and lowest line of stomach when in the upright position; by deep pressure discover the locality of the lesion; state condition of tongue. Is gas present or evidence of splenic or liver involvement?

In the meantime, Doctor, wash out the stomach carefully with solution of hydrogen dioxide, 1 part; water, 9 parts. Stop all ordinary food, allowing only small quantities of clam bouillon and peptonized milk, nourishing by rectal feeding in the regular manner. Prescribe silver oxide, gr. 1-12, half an hour before nourishment is taken, and papayotin, gr. 1, fifteen minutes after food. In addition give hydrastin, gr. 1-6; hyoscyamine, gr. 1-250; fluid extract of calendula, dr. 1, every four hours. If the man cannot accept this treatment, make his meals very light and

follow the same line of medication. In addition to the silver oxide order milk of bismuth (lac-bismo), 1 or 2 drams; it is best given one-half an hour after the silver oxide.

The writer has been very successful with these measures, but it is essential in the majority of cases to take the patient away from business for a week or ten days and during that period to rest the stomach almost entirely. The necessity for frequent enemata need not be pointed out. It may be stated that some very excellent results have been secured, recently, from the use of carbenzol (or ichthyol) and cinnamon water. From 10 to 15 minims may be given in capsule every three to four hours, 2 drams of cinnamon water being taken at the same time. The ichthyol may be dissolved in the cinnamon water, adjusted to teaspoonful doses.

QUERY 5535.—“Dropsy During Pregnancy.” T. A. S., Illinois, requests us to suggest a remedy to eliminate the albumin and relieve the static dropsies in first pregnancies.

No one remedy or combination of drugs can be prepared which will eliminate the albumin and relieve the static dropsies in all primiparas. In the first place, we cannot, by medicine, relieve pressure of the gravid uterus. The application of a snugly fitting abdominal binder is always desirable in these cases. Albuminuria is (as of course you know) a symptom merely; the causes and pathology of the renal disorders of pregnancy are not thoroughly understood.

Obstruction of the ureters, owing to the compression by the uterus, may exist, or the increased activity of the kidneys required to dispose of fecal waste may be a factor. The cardiac hypertrophy incident to pregnancy increases the blood pressure in the renal vessels, then, again, the uterus may so press upon veins or arteries, or both, as markedly to interfere with the renal circulation. Stasis in the kidneys may be caused by the increased intraabdominal pressure, and a reflex vasomotor spasm is not infrequently present, originating peripherally from the uterus. The hydremic condition

of the blood in pregnancy must always be remembered. Finally, we have to consider the absorption into the blood of toxic material from the intestine, the action of the liver being markedly different and elimination falling below par in nearly all pregnant women.

Structural changes may have existed prior to pregnancy, but become evident only during that period. There is also a condition known as the kidney of pregnancy, frequently faultily diagnosed as nephritis. Here there is anemia of one or both kidneys with more or less degeneration of the epithelial cells.

From the foregoing one can readily see how essential it is that treatment be based upon a clear understanding of the pathological conditions present in the individual. Most physicians are familiar with the methods of examination of urine for albumin, and while we may not be able today to detect albuminuria, such conditions may be plainly apparent tomorrow.

A basal treatment may be said to consist in support of the uterus (abdominal binder), equalization of the circulation with small doses of aconitine, digitalin and strychnine or, still better, aconitine, cactin, brucine, given morning, noon and night; the administration of a morning laxative saline draught; stimulation of hepatic activity by the judicious use of podophyllin, juglandin or leptandrin (1-24 to 1-12 grain of podophyllin, 1-6 grain leptandrin, 1-6 grain juglandin) before the two principal meals of the day. Also asparagin or barosmin may be given with one grain of lithium benzoate. For diuretic purposes salt sponge-baths two or three times a week are extremely desirable. Where dropsy exists, elaterin followed by apocynin will prove almost a specific. The patient (if conditions are serious) may be placed in the wet-pack, and pilocarpine given to effect.

As we have said, this treatment is suggested as basal merely. If you will send a specimen of urine and a clear clinical picture of any individual that may be under treatment we shall be only too pleased to make more definite suggestions.

QUERY 5536.—“Diarrhea.” M. P. C., Massachusetts, desires suggestions for a chronic, sour-smelling diarrhea? Also for the painless chronic diarrhea of old age.

In order to prescribe successfully it is essential to have a clear idea of the individual condition. However, it is safe to say that in this case a flushing of the bowel with small doses of calomel, podophyllin and bilein, followed by a half ounce of castor oil or saline laxative the next morning, and trihourly doses of the sulphocarbolates (5 to 10 grains), together with high enemata of an alkaline antiseptic, will prove efficacious.

If there is any pain use a combination of zinc sulphocarbonate and codeine for the first twenty-four hours instead of the combined sulphocarbolates, and when conditions are controlled give for a week or so bilein, pancreatin and sodium sulphocarbonate after the two principal meals of the day; also a good digestive combination.

The chronic diarrhea of old age requires, first, cleansing of the bowel, the wearing of a flannel band around the abdomen, the exhibition of hydrastin, gr. 1-6, and calcium sulphocarbonate, one grain, between meals; strychnine and juglandin or nux and capsicum before meals and papayotin with vegetable charcoal and sodium bicarbonate after food. Additional papayotin may be required. In many instances ten minims of dilute phosphoric acid with meals proves extremely useful in such cases. Nuclein, four to six minims, morning, noon and night, serves as an excellent vitoeicant in all senile cases.

QUERY 5537.—“Bubo. Sore Leg.” B. C. M., South Carolina, wants to know what to do for a patient who has had bubo and a sore on his leg, lower part, near the ankle, for a year or two, and which is now very offensive. The surface is ulcerated and is discharging.

Doctor, this is probably a syphilitic sore, but we cannot prescribe positively without a clearer idea of clinical conditions. What is the character of the ulcer—extent of sore? Are the edges inverted or undermined and is the base red and angry or covered with

a gray slough? What is the general constitutional condition?

Better send a blood smear and specimen of urine, four ounces from the entire amount passed in twenty-four hours. In the meantime cleanse the ulcer thoroughly with hydrogen dioxide; cut away or curet any necrotic tissue or sloughing floor; then apply oil of turpentine (Merck) with a camel's-hair brush; snugly fit into the ulcer a piece of gauze saturated with turpentine, cover with another pad of gauze, a handful of cotton and a snug bandage. Repeat this dressing daily until granulation is established and the edges close in. Now place a few pin-point grafts upon the surface, after cleansing with boric acid or normal saline solution (taking these “pin-point” grafts from the thigh or the arm of the patient). After placing them, flood the area with bovine, cover with a piece of rubber tissue or oiled silk, perforated freely with pin holes; over this lay a piece of gauze soaked with bovine, then another piece of oiled silk (unperforated); cover and bandage in the usual manner. Dress twice daily (not removing the perforated tissue unless signs of secretion or pus are evident), and then every second day, with great care, catching one corner of it with a pair of forceps and floating it up with boric acid solution thrown under it with a dropper.

If this treatment does not avail, and you have the galvanic current, go over the entire area of the sore with a small flat copper electrode until the surface becomes green, then dress with equal parts of camphor and carbolic acid (mixed) for a few days, then with bovine or sanguiferin gauze.

Internally alternate an antiscorbutic or antisyphilitic combination with nuclein, morning, noon and night in six to eight-drop doses. This is basal treatment, but it proves effective in the great majority of cases.

QUERY 5538.—“Enuresis Diurna et Nocturna.” W. L. W., Texas, sends us for examination a sample of urine (the twenty-four-hour collection amounting to 19½ ounces) from an eight-year-old child. This child is a bed-wetter (also wets his clothes

during the waking hours) and has been all his life. We are asked to investigate the urine and see if we find in it anything calculated to bring about this state of things and advise the best treatment. There is no phimosis nor anything of that character. The child is well nourished for his age. The remedies that have served the doctor best are cantharidin and brucine.

The examination shows that there is insufficient urea, somewhat low specific gravity, insufficient solids and some mucin. Improve eliminative conditions and regulate the diet. Meanwhile examine the child minutely. It is not at all pleasant to medicate a child for weeks without appreciable results and then see some old woman give a remedy for pin worms, or relieve an impacted bowel, and put a stop to the whole trouble.

When enuresis nocturna and diurna exist together (which is very rarely the case) we may regard the condition as a neurosis with increased irritability of the vesical musculature and hyperesthesia at the neck of the bladder. In such cases small doses of hyoscyamine (or better still, atropine valerianate), brucine, hydrastine and thuja every four hours, and an extra dose at bedtime, will prove efficacious. Occasionally it is a good idea to give as an alternant 1-500 grain of cantharidin. This is, perhaps, the most generally applicable medication.

Hyperesthesia of the deep urethra or sphincter vesicæ *alone* will in some cases promptly disappear under hyoscyamine, 1-500 grain every four hours. Anemic, nervous children require the arsenates with nuclein or iron and strychnine phosphate. Indigestion, worms, spinal disease, stricture, fissure or fistula in ano, adenoids, undescended testicle, ocular defects and hernia have all caused persistent enuresis. Masturbation is a frequent cause, and enuresis diurna may be due to eyestrain—a proper pair of glasses putting a prompt end to the trouble.

You can easily see how liable a physician is to fail in these cases (even after careful thought), whereas another man may prescribe at random and “stop the leak”

instantly. Study your patient, make quite sure that reflex sources of irritation do not exist, and then give the right remedy for the conditions you know to exist.

QUERY 5539.—“A. Physiology for the Working Physician.” W. C. E., Minn., writes: “My physiology is a very old work. What physiology of recent date (quite complete without being too expensive) are you in the habit of recommending?”

“I find THE AMERICAN JOURNAL OF CLINICAL MEDICINE wonderfully helpful. It seems to grow better all the time. The alkaloids have made me so much more efficient than I was formerly that I hardly know myself.”

We recommend Hall's Physiology, published by Lea and Febiger, price \$4.00, or Kirke's work, published by Wood at \$3.00; a more extensive and, perhaps, authoritative volume, is Landois' (Blakiston), price \$7.00. Another modern and very satisfactory physiology is Howell's, Saunders publisher, price \$4.00. These are all standard works covering the ground fully. A smaller, quite unpretentious and extremely valuable and correct little book is Richie's “Elements of Physiology”, published by The World Book Company, Yonkers, New York, price \$1.50.

Your frank acknowledgment of the benefit derived from the adoption of alkaloidal methods gratifies us exceedingly. We think it would be safe to say that several thousand physicians in this country are prepared to say the same thing.

QUERY 5540.—“Dosage of Arsenic Sulphide and Iodide.” E. A. M., India, desires to know how arsenic iodide, arsenic sulphide and other “toxic tablets” are to be used in pediatric practice. He asks, “Am I to follow Shaller's rule and dissolve two tablets in twenty-four teaspoonfuls of water for each year of age?”

Arsenic iodide and arsenic sulphide, may be given to children over five in the ordinary dosage. Shaller's rule, as we have so often pointed out, is extremely conservative and applies mainly to aconitine. [Note the article by Shaller in THE AMERICAN JOURNAL

OF CLINICAL MEDICINE for December, 1909.]

A child of ten years may with perfect safety take a milligram (1-67 grain) of either drug three times a day. Under five years and over two, half this quantity. A child of a year or over should not take much more than a quarter of a milligram (1-268 grain). Powders may be easily prepared with milk sugar or the drug may be dissolved in water. Always give *after* meals.

The following is not at all a bad plan to follow, Doctor, when dealing with *ordinarily* toxic remedies. The standard granule, as we have pointed out, represents "the smallest known-to-be-effective dose for an adult;" hence may be regarded as being the average full dose for a child of ten or thereabouts; from five to ten years they will receive one-half; under five, one quarter—this being, of course a flexible standard. The conditions present in the individual and character of the drug itself must always be considered.

The cumulative effect of arsenic should be borne in mind and some such drug as iridin or stillingin given at the same time to insure elimination. The skin should be kept active with salt sponge-baths.

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QUERY 5541.—"Atropine and Hyoscine Not Compatible." F. O. P., Illinois, asks whether in case of postpartum hemorrhage where hyoscine, morphine and cactin had been used it would do to give atropine to check it. If so, how much? Also where a narcotic and sedative are needed and atropine is indicated also should the latter drug be used if the hyoscine-morphine combination has been administered earlier? The writer had an old man suffering from cancer of the bowel who had taken the hyoscine-morphine with good results. He was taken with severe congestion of the lungs and atropine was given with other medicine. He then received some more of the combination but results were poor. It seemed to make him more nervous. Was the atropine the cause?

Atropine must not be used after hyoscine-morphine combinations. Strychnine and ergotin should be given to counteract any

relaxation of uterine muscle which may follow the exhibition of the anesthetic. In no case should any other derivative of the solanaceæ be administered to the patient receiving hyoscine, morphine and cactin. Intense excitement would probably be produced.

In the case you mention the atropine unquestionably might have caused the undesirable symptoms, but restlessness is usually present in pulmonary congestion.

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QUERY 5542.—"Wanted: An 'Eczema Cure.'" G. H., Ohio, in a recent letter says: "I have an old case of eczema; have tried many remedies, all no good. Now, if you know of a remedy which will help him he will send for a supply. He says he will prove a good-paying customer. Ask the maker to send him enough to convince him he will get well. He is discouraged."

Doctor, allow us to point out to you the undesirability of the procedure you advocate. You say, "Ask the maker to send my patient a supply and he will procure further supplies from you." How long would you keep your patient under these circumstances? We are continually trying to get the doctor to protect his own interests. In this connection we would urge you to read the editorial which appears in the December issue of THE AMERICAN JOURNAL OF CLINICAL MEDICINE.

People are dropping away from the doctor fast enough in all conscience and joining cults of all kinds and degrees of absurdity. For this condition of things the doctor himself is, to a great extent, responsible.

In the first place, there is no "remedy for eczema." The treatment which would prove efficacious in A's case might be entirely unsuitable for B. The underlying derangement of the body-chemistry must be recognized and corrected. In nearly all eczematous patients there exists an acidemia which must be corrected. Send us a specimen of this man's urine and full but succinct clinical data and we shall be pleased to suggest a line of treatment which will, we think, prove curative. But let the pharmaceutical manufacturer deal with you, leaving you to collect

your fees, for work done, from the patient. You would be astonished to know how many times a day we have to decline to outline treatment for laymen who, in nearly every case, learn of our existence or the efficacy of alkaloidal preparations from the doctor.

QUERY 5543.—“Division of Vas Deferens for Masturbator.” H. W. B., Kansas, believes division of the vas deferens (as recommended for sterilization of males) would be a good thing for a patient of his. The man moreover is anxious to have it done. The doctor says: “My patient is not what I call rugged, but bright and intelligent. He is not married but has been. Has always masturbated from two to three times a week and cannot resist the habit, and for the first minute or so after going to bed his heart is very irregular. He is 38 years old, and his physical condition is good. Now, would this little operation put a stop to his sexual ability and would semen be accumulated? If so, what would become of it? During intercourse emission is premature. I have recommended cold sounds. He says he is going to be cured if he has to be castrated.”

Division of the vas deferens in the case you describe would be entirely useless, and it seems that such procedures as this man contemplates are beyond the point of reason. Were it desirable to prevent his procreating his kind a division of the vas would be an effective procedure. Any man who desires to do so can stop the undesirable habit to which he is addicted. We suggest that you blister the corona glandis with cantharides, keeping it just tender enough to prevent handling. We have never yet failed to secure a cure in a case of this kind provided, that is, the patient were sane and really desired to get well.

Why should not this man marry? That, it seems to us, is the most satisfactory way out of the trouble. Separation of the vas would in no way lessen the sexual desires, but it would of course render him incapable of fertilizing the female.

QUERY 5544.—“Treatment of Chilblains.” H. D., Wyoming, wishes to know what he

shall do to cure, or at any rate to relieve, “chilblains” on the feet (mostly the heel) of an adult.

Chilblains can be readily cured by washing the feet with a tar or some similar soap and hot water, then applying camphor-menthol on gauze compresses. Balsam of Peru, drs. 2; carbazol, drs. 2; lanolin, drs. 4, makes an excellent application, but perhaps one of the most useful formulæ is camphor, chloral and carbolic-acid crystals, equal parts of each rubbed down in a mortar and applied (after washing the feet well as directed) with a camel's-hair brush. This will put a prompt stop to the itching.

Internally give small doses of blue mass and soda with podophyllin at half hourly intervals every other night for a week. Strychnine and cactin (or digitalin) three times a day, and the three arsenates with nuclein after meals.

A coating of collodion in which orthoform has been dissolved has proven extremely useful in the writer's practice. Two or three coats should be applied at bedtime—always after the foot has been thoroughly soaked in hot salt water. Aconite and chloroform liniment is another excellent application. Resorcin with ichthyol and tannic acid may be used if skin is unbroken. One part of each is added to five of water and applied at bedtime.

Tincture of benzoin applied thoroughly after a hot salt foot-bath serves the purpose excellently. Always improve circulatory conditions and give eliminants.

QUERY 5545.—“The Widal Reaction.” S. A. D., Arkansas, asks for “some literature describing Widal's blood test for typhoid fever.”

You will find the Widal test described in any modern textbook on physical diagnosis. The lobe of the patient's ear should be pricked with a sharp sterile lancet, the first drop of blood allowed to escape and the next drop caught upon a clean glass slide. Cover with a cover glass (first sliding the two surfaces together so as to spread the smear) and dry by waving over the alcohol flame. Fasten the slides together with gummed

paper, label with the name of the patient and mail to the laboratory.

Some of the large manufacturing houses now provide a bottle of sterile suspension of the bacillus typhosus, together with test-tubes, lancet and tube for collecting blood. Directions for making the Widal test accompanies the outfit. For full technic see Hare's "Practical Diagnosis." This test, however, is not reliable except in the hands of an experienced observer. See Ewing on "The Blood."

We advise you strongly to secure the specimen of blood and forward same to a well-equipped laboratory. In an emergency merely a drop of two of blood on a card wrapped in clean white paper and mailed is all the pathologist requires.

QUERY 5546.—"Uterine Cancer." A C., New York, has a patient suffering from uterine cancer and desires to learn of some local application that is a better disinfectant and deodorizer than iodoform."

Presuming that the case is inoperable, the only thing that can be done is to keep the patient as comfortable as possible and remove the odor from the discharge, which latter should not be checked. Under the circumstances you will find carbenzol or ichthyol tampons excellent. Thoroughly cleanse the parts with an alkaline antiseptic solution, then pack strips of gauze or wool tampons soaked with the selected medication into the fornices and vaginal canal, renewing the application as often as may be necessary. Chinosol in a 1 : 500 or 1 : 1000 solution may be used to cleanse the parts, and orthoform insufflations to relieve pain. Calcium carbide, a piece the size of a walnut, may be placed in contact with the diseased area and the vagina filled with iodoform (or chinosol) gauze. After a few days give a copious hot douche of corrosive-sublimate solution. This removes the calcium oxide. The tissues will now appear grayish and smooth. Pain and hemorrhage are controlled by this method.

Copious applications of papayotin and pepsin may be made every few days: after three hours a hot saline douche is given and

the vagina packed with gauze soaked in olive oil holding terebene in solution (terebene 1, olive oil 16 parts.) Pyoktannin-blue is often useful. Apply as dusting powder, or in 1 : 300 solution injected every few days here and there into infiltrated tissue; or in crayon form, combined with tannic acid, opium, olive oil and cacao-butter. Hyoscine, morphine, cactin and pilocarpine (the modified H-M-C combination) may be given internally to maintain comfort.

QUERY 5547.—"Calcium Sulphide Saturation." D. R. P., Illinois, has never been able to saturate a patient with calcium sulphide. "I have," he writes, "given one grain every two hours for two days to one patient and every hour for a week to another but have never been able to get odor from the breath (except eructations from stomach) and, at times, patients have rebelled against taking the drug. What's the reason?"

The saturation of patients with calcium sulphide is one of the most simple things imaginable to accomplish. Do not use compressed tablets or pills of calcium sulphide but the 1-6-grain granule, giving 1-6 or 1-3 of a grain hourly for twelve to twenty-four hours, then 1-3 of a grain four to six times daily. By the end of two days at the longest the breath and skin will smell strongly of sulphureted hydrogen. This is "saturation." We have pointed out many, many times that the compressed tablet is not satisfactory. Calcium sulphide is a peculiar drug and when subjected to pressure becomes as hard as stone. Most of the tablets upon the market, therefore, pass through the alimentary canal unchanged; granules disintegrate rapidly. A one-grain tablet given every two hours for two days, would not be as satisfactory (if any result followed) as 1-6 grain hourly for half the period.

We have never failed to obtain the desired results and we are quite sure that you will be equally successful from this time forward. Remember the necessity for cleaning out and keeping clean the intestinal canal.

QUERY 5548.—"Calomel and Calx Iodata Incompatible." W. S. H., North Carolina,

asks: "Is there any danger of calomel and calcidin forming iodide of mercury when administered simultaneously?"

We never should administer calomel and calx iodata simultaneously. Calomel is given in small repeated doses; calx iodata, as a rule, at longer intervals and for a prolonged period.

Calomel, 1-6 grain, with or without podophyllin (or similar drug), 1-6 grain, half-hourly for four to six doses is the usual preliminary "clean-out" medication of the positive therapist. The administration of calx iodata, when indicated, would follow or, for that matter, it might *begin* concurrently, but, save in some emergency (such as croup), during the hour or hour and a half in which calomel is being given calx iodata would only be given once. In croup, or where very *prompt* effect is needed, 1-3 to 1 grain would be given every fifteen minutes; however, in such a case the relief of the immediate symptoms would be the main thing, the calomel following. No danger need be apprehended from the use of calomel and calx iodata given together dosimetrically, although it would not be therapeutically or chemically correct to give these two drugs in conjunction for longer than a short time.

Our chemists have tested out the reaction of calx iodata on calomel and find that they are incompatible. The interaction will go on as long as there is any calomel remaining, resulting in the formation of calcium chloride and mercurous iodide. This means the using up of considerable of the available iodine-content of the calx iodata, thus decreasing its therapeutic value. Moreover, calomel is not absorbed into the system but mercuric iodide is. This would mean another complication. While no toxic effect need be apprehended from the minute doses for brief periods, it is highly desirable to keep the two drugs separate.

QUERY 5549.—"Partial Paralysis and a Dog-bite." J. R. L., South Carolina, describes the case of Mr. H. who in the spring of 1908 was bitten by a rabid dog. No

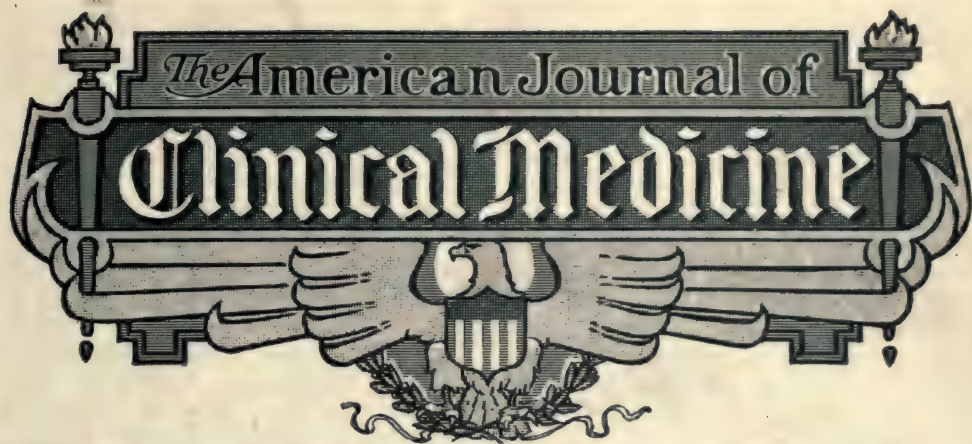
serious results followed until about the middle of July, when there was suppression of renal action for some thirty or forty hours, a uremic toxemia supervening which lasted several days; the bowels were active all the while. There followed a slight paralysis of the left side of his face with constant dribbling of saliva, enough to wet the pillow during sleep. At present he cannot see out of his left eye, but the right one appears to be all right. His speech is bad, locomotion also; mind is foggy. The patient has been on tonics and alteratives all the time, but with unsatisfactory results. The patient is a well-educated man and of good family. The question is whether the bite of the rabid dog had anything to do with the case; suggestions are requested.

Obviously it is impossible to express an opinion as to whether there is any connection between the existent conditions and the dog-bite without having a more definite picture of the patient's prior history and present physical condition. The anuria and uremic toxemia would naturally lead one to suspect nephritis, and we surmise the disturbance of vision is of renal origin.

It would be advisable to send specimens of saliva, urine and blood to the laboratory for examination.

Then we advise to test the reflexes carefully (especially ocular and patellar), examine the spine for hyperesthetic and anesthetic areas, and look carefully into the past history for possible luetic taint. Further, was the dog definitely proven rabid? You do not state the patient's age, nor in what spot he was bitten, or the remedial procedures which were instituted at the time. As you are aware, symptoms of hydrophobia may not appear for a year although usually making their appearance in two or three months. A serious toxemia might follow a dog-bite even though hydrophobic symptoms failed to develop.

In this particular instance there does not seem to be any valid reason for connecting the bite with the later disturbances. Have you tried to control salivary flow with atropine or hyoscyamine?



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The Hygiene of Sleep and the Treatment of Insomnia

THE ancients considered sleep the greatest gift of the gods. Men resemble animals in their preparation for sleep. Usually one lies first on the left side, then he turns to the right, then he gets drowsy. What does this signify? A sanguine hypostasis? No, for that would be coma, or a nightmare, as when one goes to bed after a full meal or when the portal vein cannot completely empty itself. Then one has dreams with all the horrors of reality, and in the morning he seems nailed to the bed. One is stifled, strangled. Whence comes this? Here is a true hypostasis—the venous blood backs into the sinuses of the spinal cord and over to the brain.

But when the evening has been spent agreeably and one goes to bed laughing, the dreams are the same—such as, the ancients said, passed by the gate of ivory. One feels something of lightness, ethereal-like, because the brain is not congested.

To secure this, one should enjoy a good hygienic regimen, not occupy himself with serious studies too late, give himself up to agreeable reading or conversation with

amusing people, avoid all irritating discussion, not eat too late nor drink too much. Too much beer is bad and causes acid dyspepsia.

But one cannot always force the brain to go to sleep. Thought, which is its function, as digestion is the stomach's, often continues active after the hour for repose has come, and if this active cerebral state is prolonged it becomes insomnia. At other times there are moral or physical maladies. What is to do then? Opium? Hufeland has well said that this was a double-edged tool. It relieves pain, but it does not induce sleep except it be heavy, because it congests. Morphine has the same inconveniences to a less degree; besides, it arrests digestion and next morning one has a heavy head, and tongue is coated, as if he had gone to excess the evening before. Codeine and narceine are less active, but for that very reason do not fill the need. Hyoscyamine causes vague dreams, but induces mydriasis. Besides, none of these induce vascular sedation, and that is necessary for sleep.

Ordinarily, through the fatigue of the day, the temperature of the body increases until

9 or 10 p. m. to about 0.2°C ., a sort of fever that subsides by midnight. This is why many persons are unable to sleep well until this hour. One should therefore prepare for it by absolute rest and by refreshing drinks. This is the basis of the use of tea in England and Holland, followed by a glass of claret as the night advances, for diluents alone would prevent slumber. It is necessary to avoid big suppers and late sleep, as this loses one the vivifying air of morning.

So far for hygiene; but often it does not suffice for very impressionable individuals and for brain workers. Here we require the sedatives of the vascular system, aconitine and digitalin.

Burggraave was long tormented by insomnia, and could not endure morphine. He had recourse to aconitine and digitalin, which procured calm in the night. He spoke feelingly of his suffering from insomnia. "It seems as if all the thoughts overflow you at once and one finds himself in a whirlwind; he turns and returns, a sort of uproar recommences, humming in the ears, the pulsation of the arteries like blows of a battering ram. This shows that insomnia is due to exaggerated pulsations. A little time after taking the granules—three or four of each half an hour before going to bed—one feels calm returning, and the thermometer shows that this coincides with a fall in temperature of one-fourth degree Centigrade. The pulse falls to or below seventy. This is the most favorable moment for going to bed, when a peaceable slumber soon supervenes, provided the mind is not much preoccupied."

Cazenave asserted that sleep coincides with cerebral anemia and insomnia with cerebral congestion. But cerebral anemia prevents sleep in chloranemics. This, however, is due to the low tension of the cerebral vessels; for these persons are apt to be drowsy while sitting up, as the weak heart and relaxed arteries do not supply the brain with blood. On lying down the cerebral vessels are too weak to resist the influx of blood and cerebral anemia does not occur.

Jouffroy said dreams were due to the waking mind while the body slept. But absolute

repose does not occur with the brain and psychic impressions persist and reappear at the least disturbance like phosphenes to the eye. In sleep these are vague and difficult to recall on waking.

He attributes insomnia to two groups of causes: the direct, such as a too ardent imagination, passions, religious exaltation, overwork of the brain, cerebral maladies, especially if accompanied by fever; the indirect, or symptomatic, such as jaundice, dyspepsia, chlorosis, syphilis, suppression of habitual hemorrhages, traumatism, alcoholism. The latter may be soothed by aconitine and digitalin, especially if due to alcohol. The brain is to be calmed by the heart.

"Growl, and the way looks dreary,
Laugh and the path is bright,
For a welcome smile
Brings sunshine, while
A frown shuts out the light.

"Sing, and the world's harmonious,
Grumble, and things go wrong;
And all the time
You are out of rhyme
With the busy bustling throng."

BACTERIAL IMMUNIZATION

One of the most promising fields for development in medical work is immunization against certain diseases, or rather their causes. But no one now agrees with Wright that "by means of the bacterial vaccines we have the power of raising the antibacterial power of the blood, with respect to any invading microbe, out of all comparison the most valuable asset in medicine;" though admitting that the principle is right, it is merely a question of means. If, for example, Mikulicz is right in his assertion that the hypodermic injection of nuclein before an abdominal operation increases the resisting power of the peritoneum against pyogenic bacteria twenty-fold, is the method not preferable to the introduction of an indefinite number of millions of dead bacteria?

A thoughtful article on the subject is that of Dr. B. A. Thomas, Assistant Instructor in Surgery in the University of Pennsylvania, in *The Journal of the American Medical*

Association for January 29, 1910. It is based upon an experimental study of 106 various affections, covering in all 50 distinct diseases, in which autogenous bacterins of one or more of the following were used: *Staphylococcus pyogenes albus*, *staphylococcus pyogenes aureus*, *bacillus coli communis*, *bacterium ferrugineum*, *bacillus fluorescens*, *diplococcus gonorrhœæ*, *bacillus proteus vulgaris*, *bacterium punctatum*, *bacillus pyocyaneus*, *streptococcus pyogenes* and *bacillus tuberculosis*.

He deplores the fact that this form of therapy has been seized upon by men who have little knowledge of the principles on which it is based or of the proper indications for its use; by reason of which, or by an overdependence on the opsonic index as a guide, by carelessness or inattention to certain clinical signs and symptoms, be they ever so slight and seemingly trivial in nature, or finally by an irrepressible enthusiasm to "push the treatment" as soon as improvement becomes manifest, the method has almost invariably led to disappointment, if not to utter failure and disaster. This is particularly true of tuberculous affections, in which a prolonged, tedious and cautious course of treatment of from six to twelve months' duration must be instituted.

The problem: "In what class of affections bacterin therapy shall or shall not be utilized?" is still beset with many difficulties, owing to the variability in the application of the treatment. Thomas says: "That inoculation by bacterin, in properly selected cases, plays an extremely important role in convalescence is indisputable; that failure to obtain expected results is due often to ignorance or misapplication of this particular kind of treatment in contraindicated cases, thereby unjustly placing active immunization in disrepute with many clinicians, is unquestionable."

To use the bacterins during the course of an acute infection seems to him unwarrantable. "For," he says, "the defenses of the organism have already been exhausted and broken down, which accounts for the occurrence of the bacteremia. How illogical, therefore, the introduction of an antigen, in

the hope of stimulating these body-cells to the production of antibodies, when their supply has already been consumed! We must not expect the impossible from bacterin therapy. Scientifically considered, from the standpoint of anaphylaxis, it is not improbable, in cases of bacteremia, that the inoculation of bacterin may not only do no good, but actually result harmfully. The organism is already in a state of hypersusceptibility induced by an overwhelming autogenous antigen, when, if the theory of Vaughan be correct, albumin in the body is broken up into the toxic and nontoxic groups. At the time of the heterogenous injection of dead bacteria the body attacks the albumin so vigorously and releases so much of the toxic group that it is overcome by the poisonous radical. On the other hand, late in the course of the disease, if the patient survives, it must be recalled that the inoculation of dead bacteria may act beneficially."

In Thomas' experience abscesses afford a fruitful field for bacterin therapy, excepting those in which the *bacillus pyocyaneus* occurs, in which cases not the slightest benefit has been noted, the explanation perhaps being that it is an acute infection engrafted upon a previous suppuration due to *staphylococci*. The most brilliant results have been obtained in multiple subcutaneous or superficial abscesses. Four inoculations cured a case of *acne vulgaris* of fifteen years' duration.

In the treatment of sinuses good effects were produced, though not so striking as in abscesses, chiefly because mostly carious bone or other foreign bodies lie at the bottom of the sinuses and keep up the suppurative process, which can be overcome perhaps, in the case of bone, by irrigation with one-half of one-percent solution of sodium citrate in five-percent salt solution as suggested by Wright. In fistula of the rectum results have been negative.

He regards cure of empyema as questionable by this line of treatment even with free drainage, only slight improvement having been secured thus far.

Theoretically the use of the bacterin of *streptococcus pyogenes* ought to be promptly

curative in erysipelas. Practically the results have been rather disappointing.

In the management of postoperative wound infections he declares that although the results have been satisfactory so far as cessation of suppuration and wound repair are concerned, it is impossible to place the credit entirely to the inoculation of dead bacteria. Cases treated with stock bacterins have responded equally with those in which the autogenous preparation was used.

As to the infections with the gonococcus, osteoperiostitis due to chronic gonorrheal infection has yielded beautifully, gonorrheal prostatitis has promptly subsided and chronic urethritis quickly disappeared; but cellulitis was not benefited, while vulvovaginitis has responded better than to any other plan of treatment.

The mixed infection of late tuberculosis likewise has shown marked improvement under this form of therapy.

From his rather variegated experience the author draws these conclusions:

1. The diseases contraindicated for bacterin therapy are the diffuse infections characterized by septicemia, pyemia and grave sapremia.

2. Those in which therapy by this agent is beneficial or curative are the superficial acute, subacute and chronic processes, especially the last two.

3. The acute cases, in which brilliant results can be uniformly expected, are those of acne vulgaris, furunculosis, carbunculosis and subcutaneous abscesses.

4. Subacute and chronic gonorrheal and tuberculous affections are amenable to bacterial immunization, and because of the frequent impossibility and impracticability of employing an autogenous bacterin the reliable stock preparations should be used.

5. Certain acute gonorrheal infections can be benefited.

6. It is questionable whether tuberculin therapy should ever be employed in very acute tuberculosis. Opinion is divided as to whether or not acute miliary tuberculosis and death supervened as a result of tuberculin therapy in one of our cases, No. 81 of the series.

7. The mixed infections in chronic tuberculous disease afford an important prospective field for alternating bacterial inoculations and tuberculin therapy.

8. Autogenous bacterins are always to be preferred over the stock preparations, and success or failure frequently depends on this fact.

9. Although the duration of the period of greatest potency of bacterins is undetermined, the best results have been obtained when the pus has been recultured and a fresh bacterin prepared every two to four weeks.

10. It is believed that the best effects, therapeutically, particularly in chronic cases, occur when the quantity of bacterin is slowly and cautiously increased during successive inoculations, thereby, as has been thoroughly demonstrated in tuberculin therapy, avoiding hypersusceptibility, or anaphylaxis.

11. Therapy both by bacterins and tuberculins can be satisfactorily executed by keen observance of the clinical symptomatology. Reliance on the opsonic index as a guide is not only unnecessary, but often conducive to erroneous conclusions, owing to its variability.

12. Bacterin therapy, by virtue of its potency to do more harm than good, when unskillfully managed, will or should probably not become a universal therapeutic measure in the hands of the general practitioner unfamiliar with bacteriology or with work in the laboratory. Ignorance and wantonness are incompatible with ambition and energy, and an otherwise meritorious therapeutic agent thus abused will ultimately fall into disrepute.

13. The employment of bacterins made from bacillus pyocyaneus has been useless.

14. Bacterins and tuberculins are not "cure-alls," but when intelligently used serve as invaluable aids to nature in fortifying the bodily defenses, thereby accelerating convalescence, diminishing complications and promoting cure.

VERATRINE IN PRACTICE

Gerhardt declared that the doctor who dared administer veratrine ought to remain

by his patient's bedside, to be ready to extend aid when needed. Burggraeve details a case of traumatic pleuropneumonia in which he gave a milligram of veratrine every half hour until nine doses had been taken. He asks, where is the danger of which the German speaks? At first he, Burggraeve, had felt the same way, and scarcely dared venture on 3 or 4 milligrams of veratrine. Now he gave up to 20 milligrams gradually. No doubt there is danger in doses of 2 1-2 centigrams as mentioned by Liebermeister.

In the case quoted by Burggraeve, a man had pleuropneumonia following the fracture of a rib; he was in a stupor, respiration and circulation barely perceptible. He was given phosphoric acid and strychnine, with a little hot wine, and the thorax was immobilized. In two hours the pulse and heat had returned, when venesection was performed, the remedies being continued. Next day the pneumonia had declared itself and veratrine was given, a milligram every half hour for nine doses, when diarrhea began and the fever fell. By the next day the lungs were completely clear.

Barrere details the case of a boy aged fourteen, with pleuropneumonia, pulse 125, respiration 28, temperature 102.2°F. Under aconitine and veratrine, a granule of each every hour during the night, the fever fell to 100.4°F., the pulse to 100. The treatment was continued for three days, the mother remarking, "I can make the pulse and temperature descend or allow them to rise at will."

Birabent cured a similar case in eight days, with aconitine, veratrine and quinine hydroferrocyanide.

Bourdon's case was of the ataxodynamic form. Without strychnine pushed to full effect death was certain. He adds: "I have more than once seen the powerlessness of alcohol in these grave cases."

Costa records a case of double pleuropneumonia treated with aconitine, veratrine and strychnine, a granule of each every hour, with laxative salines. As the fever fell this treatment was changed to strychnine sulphate and quinine arsenate. The case was dismissed, cured, in six days.

Ternisien reports three cases. One was aborted in one day by veratrine and strychnine. The second was that of a man who had had repeated similar attacks. He was given veratrine and cicutine. Diphtheria appeared and he was put upon calcium sulphide, strychnine arsenate and phosphoric acid. The cure was rapid and sure. In the third case leeches were employed; then veratrine, flying blisters for the pleurisy, phosphoric acid, and a little codeine for the cough. The case ran two weeks—an unusual time with this method in force.

We become largely what we think we want to be. High thinking leads to high aiming. If we think great things long enough and hard enough, some day we are likely to do them.—W. H. Cottingham.

CRATAEGUS OXYACANTHA

Dr. Thomas F. Reilly, in *The Journal of the American Medical Association*, cites two cases in which crataegus appeared to be of value. A woman, aged 33, had had, for four years, pain and distress about the heart, paroxysmal, at times with syncope, dread of death sometimes continuing for weeks. Pulse 90, slight lateral enlargement of the heart, no gastrointestinal disorder. All cardiac tonics and stimulants seemed to aggravate the disorder. Bromides quieted the nervous system and the apprehension but did not affect the heart symptoms. Crataegus in 20-minim doses gave the first complete relief in four years. Subsequent attacks had been averted by prompt resort to this remedy.

A woman, aged 28, had been having attacks of precordial pain for a year; no gastric manifestations, pain of a squeezing character, continuous, made worse by excitement; there was a moderate blood pressure, mitral systolic murmur at apex. Some benefit followed upon the administration of digitalis, but the pain continued. Crataegus, 20 minims every four hours for two weeks, caused the pain to disappear and after three months it had not returned.

No diuresis or rise in blood pressure followed its use. Dr. Reilly thinks crataegus

a perfectly safe agent with no poisonous effects. He suggests its use in aortic disease, arrhythmia, fatty degenerations, in cases with high arterial pressure and where digitalis is not well borne. It is better given during or after meals, in doses of 10 to 20 or 30 minims of the fluid extract.

"SURGICAL JUNK"

That veteran operator, Joe Price of Philadelphia, contributes to *The Southern Medical Journal* a most suggestive paper on "Surgical Junk." Here are a few specimens:

"A distinguished specialist in gall-bladder diseases lost four patients in a series of five. I reopened the abdomen twice in the fifth patient. I thought I could relieve him by freeing adhesions in the first attempt; in the second I removed his diseased gall-bladder and placed his viscera in normal relations."

"I received a letter from a young surgeon, asking me to take a patient or to tell him how to deal with it. She had had two or three gall-bladder operations followed by fistulae and is now septic and asks for relief. I wrote him, 'I don't want her; hands off.'"

This is refreshing. Such cases are not often dilated upon by the surgeon. The idea sedulously held up for our admiration is that when in the case of a patient "all other treatment has failed," the surgeon steps in, and presto! the miracle is wrought.

Only ideas and ideals survive. Things of stone and metal and wood are tid-bits in the teeth of time.

—Herbert Kaufman.

THE DOCTOR AND PATENT MEDICINES

In the whirlwind campaigns of publicity of all manner of fads, foods and physics the doctor is treated as a mere lay figure or puppet and is employed as best suits the purposes of the advertising writer. In one place we find him buffeted about, stigmatized as a faker, an imposter and a butcher of men; in another he is placed upon a little stage throne and somebody's remedy is made to shine in his reflected glory.

Some of the food-faddists delight in depicting avaricious doctors operating to re-

lieve conditions which would yield promptly to the use of "Soandso's Breakfast Food;" cultists picture him as magnifying diseases which are merely figments of distorted imagination or which do not exist at all.

But down at the bottom of most patent-medicine advertising we find that the game is given its stability by being made to rest upon the confidence of the people in the family physician. There is "Dr. Whatyoucallem's Favorite Prescription", and Dr. Whatyoucallem, who perhaps never existed outside the fancy of the advertising man, is shown as a benignant and bewhiskered physician of the old school resting his soft, cool hand upon the fevered brow of suffering humanity. Unconsciously, perhaps, the "Favorite Prescription" is accepted as worthy of confidence on account of the alleged association with the good old family doctor.

Popular education, for which the medical profession is responsible, has advanced the people beyond their former conception of the secrets and mysteries in medicine. The layman has awakened to the fact that medical practice is the application of the rules of cause and effect and that medical knowledge is not the private possession of any individual however learned he may be. Hence the charm of "Dinwiddie's Medical Discovery" has waned and "McAdoo's Mysterious Medicine for Many Maladies of Man" makes few converts.

The modern, up-and-doing advertising man has seen that he cannot successfully fight the doctor in his patent-medicine publicity and so, with his characteristic aptitude, he has utilized the man of medicine to his own ends.

"Eminent doctors prescribe Sloan's Silicia Salve" says the modern street-car advertisement. Of course eminent doctors do no such thing; but who will stop to inquire about it?

"Distinguished physicians agree on this prescription" is the heading of a newspaper article in which is given a formula of whisky, sarsaparilla and "fakerina" as a cure for whatever ails you.

Thus the patent-medicine man takes credit through "eminent and distinguished physicians" of fiction.

But one literary gem in patent-medicine advertising goes even further. It actually protects and upholds the good, kind doctor against the assaults of his enemies. "Are all doctors quacks?" the advertisement demands indignantly. "We all know there are ignorant quacks; does that prevent anyone calling in his good old family physician in case of need and trusting him?" The printer's ink actually runs in the heat of the advertising man's anger. The idea of losing confidence in the good, kind physician just because there are some quacks on earth! And then the argument—the *q. e. d.* of the problem. As some doctors are quacks, so are some medicines "fakes." As some doctors are good, honest, kind and trustworthy, so is "Gidia Linkham's Veritable Compound" good, honest and trustworthy.

And the unsuspecting public, which has been accustomed to the blatant claims of patent medicines and the condemnation of doctors, cries in its admiration: "Here is a remedy on the square, for it places the honest family doctor on the same exalted plane as good old Gidia Linkham."

Physicians seem unwilling to comprehend that active medicaments exert a purely physiologic, catalytic action.—Burggraefe.

AS TO UNPROFITABLE FRETTING

How regrettable it is that those who affect to be so fond of making themselves and, what is far worse, others around them intensely miserable will not realize that nothing on earth is gained by fretting. Hard work viewed in the distance seems too much for one person to perform, but when it is brought close much of the difficulty disappears. When one's mind is fully made up that a certain work shall be done one begins to devise a way, and soon the obstacles are removed and the thing itself becomes an easy task. As the work progresses it actually becomes interesting, and when at last it is finished it gives more real satisfaction than

would much other employment less difficult and of minor importance.

Hard work must not be confounded with overwork. This is never commendable, for no one has a right so to exhaust his physical powers as to unfit him for mental recreation. The man or woman who drudges from morning till night and lies down, like the weary beast of burden, to sleep till morning calls to labor again must have a mind as empty as a soap-bubble and cannot enjoy the benefit of his labor.

Hard work must not be continued to exhaustion; the harder the labor the less of it should be taken for a day's work. We can put in two, three hours and not suffer, but with double the time of exertion we have trespassed on the laws of health. Better occupy half the day in lighter employment. Take a good night's rest, and begin again the next morning with new interest. A tired person is very often a disagreeable person, and is never pleasant company.

HOW NOT TO TREAT ABORTION

An esteemed subscriber in far-away New Zealand recently sent us a contribution, culled from his case-book, describing a case of what he calls miscarriage, in a woman 29 years old. We should like to have reproduced the report in full, were it not for its length; but we must content ourselves with giving an abstract, briefly detailing the treatment given.

The doctor was consulted one Sunday evening by the husband of the patient, who, he said, had, the day before, lost much blood and had passed "a piece of flesh as large as his fist." No doubt, the doctor was tired after his day's work and did not relish the prospect of a two and one-half miles' tramp "across paddocks," so he prescribed ergot and hamamelis and prescribed hot drinks. The next day, on a visit, nux vomica and macrotys were added to the mixture and minute directions given for diet.

One day later, the discharge being profuse, an examination was at last made. The doctor "found the uterus relaxed, the

os (!) greatly swollen and very sensitive." He therefore pushed the ergot and ordered cold drinks. He also left "some absorbent cotton-wool, in case profuse flooding should return and ordered to send" for him at once.

He was called a few hours later, because the patient was flooding very badly. We quote: "When I arrived, I found her in a very exhausted condition and complaining of a severe pain in the hypogastric region. On palpation I found a hard body and came to the conclusion that the embryo had detached itself." Where was the hard body? Why should it suggest that the *embryo had detached itself*? Where had it been attached? Again ergot and hamamelis were pushed, and the doctor staid the night, but does not seem to have done anything.

In the morning (fourth day!) it occurred to him that the patient was constipated, since she had passed nothing for four days (Ye gods!). So he administered an "enemata" (Why not enema, since there was only one?) of two drams of glycerin. "On straining at stool she passed very hard feces, clots, and an embryo about three inches long."

Of course the flow continued, so the trusty ergot was resumed, this time with cactus. For the next week pain, flooding, and other symptoms appeared, disappeared and reappeared in a sort of hide-and-seek play, and were promptly dosed with a variety of specific tinctures, until finally nature asserted herself and the patient recovered *in spite* of the treatment given.

Now here is a physician, with a good medical education and in good standing, or else he could not practise in New Zealand where we understand the laws regulating the practice of medicine to be strict. He dashes off, in the form of a letter, a report for publication. The only point of possible interest in the whole report is that apparently "the placenta came away five days before the embryo—a rather unique proceeding," if we admit that the piece of flesh as large as a man's fist which had passed the first day actually was the placenta—a thing which we question, since the embryo was only three inches long.

Why, then, mention the report at all? It occurred to us that it might afford an opportunity of showing by a concrete example how *not* to treat abortion. (It was not miscarriage, as the title of the report has it, but abortion.)

Abortion is not a disease that can be treated and controlled with medicines and with dietary regulations, however well considered they may be. The "Digest of Positive Therapeutics," page 41, gives the hint to tampon the uterus and vagina in rebellious cases, that is, in cases where abortion can no longer be prevented. Every textbook on Obstetrics says that in cases where abortion is inevitable, the uterus must be emptied as promptly as possible, using all aseptic precautions. The vaginal tampon properly applied will not only control the hemorrhage, but will also stimulate uterine contractions and encourage the separation of the ovum from the uterine wall. The application of the tampon must be preceded by a thorough emptying of both bladder and rectum.

With this treatment, medicines which act directly on the uterus are hardly indicated, except perhaps such as will relax the organ. But it is hopelessly bad practice to lock up and double-bar the uterus, and render its efforts unavailing with ergot, while anything is left inside it. Unless the vagina is packed, it is decidedly risky to leave the patient even for a few hours, because uncontrollable hemorrhage might occur. You will have to remain with her, ready to go to work, and with your hands, not with medicines, which in this case and for the end desired are silly. After the uterus is thoroughly emptied, you wont need ergot any more, unless the organ is badly weakened by abuse; and in that case a few guarded doses are all that is required. If flowing continues, you may be sure that the uterus is not empty. and it is up to you to get it clean.

Don't wait four days before emptying the bowels. Get after them the first thing after having attended to the symptomatic flooding, while you wait for things to happen. And don't, don't play with a dinky little two drams of glycerin per rectum. You might

as well go shooting moose with bird-shot. Give a good big enema of warm water and soapsuds, enough to wash out and flush the rectum, or perhaps two enemas or more, if the descending colon continues to shoot scybalæ into the rectum.

The case, as reported, required a good two weeks' time before convalescence was established. It might easily have been terminated favorably within twenty-four hours, with proper management.

You say: "Everybody knows how to manage an abortion, and you might have saved our breath."

True enough. But not everybody does manage an abortion properly, or in any way sensibly, and the poor women have to suffer for our carelessness. If you want to be a doctor, be a good one, do things right, and do them when they should be done, at once; and keep at them until they are done. If you do not want to do that, better take in your shingle and turn politician; then you may perhaps secure a nice easy job, where you can talk and don't have to hustle.

Another thing. We are glad indeed to have reports from the field. We want them: most of them give something worth having and worth knowing. But if you do write, please have a little consideration for the editor. Write your stuff *after* having thought it over, not before. Arrange it in an orderly manner; write on one page only; write legibly if you do not have a typewriter. The readers of CLINICAL MEDICINE know a good thing when they see it and appreciate it the more when it is aptly said. While we are glad to "fix things up" for busy friends, they shouldn't expect *too* much from us.

Every man should keep a fair-sized cemetery in which to bury the faults of his friends.—H. W. Beecher.

THE AMERICAN SURGEON

The American Surgeon has been in the limelight so long, and has been in the habit of looking upon himself as most emphatically and exclusively "IT" for so many years, that it is quite refreshing to the rest of us to hear our recent visitor, Jonnesco, give

utterance to the impression formed by him during his visit. He says the American Surgeon is rather to be pitied than blamed!

Good! Come again, Jonnesco; we shall be glad to see you.

THEOLOGIC MEDICINE

When, not long ago, a medical college came under the supervision of a certain sectarian university the faculty was left free as to its teachings, with three exceptions, to wit, they were required not to teach atheism, nor craniotomy, nor evolution.

With the first and second requirement we are heartily in accord. The atheist may be such from a conscientious belief, but he has no business to lug his personal belief in religious matters into his teaching of medicine, where it is out of place. If he goes out of his way to inculcate a religious faith that will be a serious obstacle to the success and usefulness of the student when a practising physician, he shows no more sense than if he were to urge his students to wear a red shawl when crossing a field the abode of a vicious bull. Such a man should have no place on a medical faculty.

As to craniotomy, we here face a moral question that the physician as such must decide—as a matter of fact, have we the right to take a life to save one, since there are other means of saving the mother? Frankly, we stand with the Church in this matter and find no fault with the restriction.

We now come to the most important question, that of evolution. Here we see a group of theologians who are not men of science assuming to restrain a group of scientists from teaching what modern science has universally accepted as a fundamental truth. This is based on the supposed necessity of having all departments of human belief and investigation regulated by the Church and harmonized with her ancient creed. This has ever been the means of separating church and science since the day when men were told that it was immoral to say that the world was round, because the Bible spoke of the "corners of the

earth;" hence it was square, and the firmament was glued over it like a watch-glass—and a curious book was written discussing the nature of the glue employed.

Moderns reverence the Bible and the church as teaching a system of morals that has endured for ages, and will endure, because it is true; but few men of scientific attainments anticipate that the development of knowledge will in no way modify the standards of sciences fixed by the priests and prophets of ancient Judea. These men stated the truth as they knew it, and suffered martyrdom rather than depart therefrom; but how could they know all—we do not know everything yet. It seems unjust to require such prevision from them, and the assumption of such miraculous knowledge would reduce Christendom to the intellectual deadness of China since the days of Confucius.

By foregoing the teaching of evolution the faculty of this college submit themselves to the dictation of men who are not capable of deciding such matters, and are constrained to array themselves against the science of the age. They can not give the true explanation of many phenomena, and to the inquiring student they must present the blank wall of the forbidden. Not only do they thus limit his acquisition of necessary knowledge but they powerfully discourage his aspirations for more light, and turn him into a mere learner by rote of the teachings handed down by a superior authority.

Such a student may become a fairly safe practitioner, but he will be debarred from that freedom of investigation that has produced all the advances of science in its entire range. He can not recognize in the pineal gland the relics of the cerebral eye, in the external ear a gill-arch, in the appendix the remains of a formerly important digestive apparatus. His arch lacks the keystone and is a mere pile of material, it is not a real structure. He is without that definite plan that enables one to comprehend and explain the functions of any part by its interrelations with the body as a whole; the human body by its relations with animate

nature; this by its relations with that of past eons.

We can not congratulate the members of this faculty who retained their chairs in the medical institution under these painful limitations.

Just when the pearl was waiting one more plunge,
How many a struggler has thrown up the sponge;
And O how true, when shades of doubt dismay,
'Tis often darkest just before the break of day.
A little more persistence, courage, vim,
Success will dawn o'er fortune's cloudy rim.

Then take this honey for the bitterest cup,
There is no failure save in giving up;
No real fall as long as one still tries,
For seeming set-backs make the strong man wise.
There's no defeat, in truth, save from within,
Unless you're beaten there, you're bound to win.
—Anon.

THE "NO-DRUG" ADVICE OF WOODS HUTCHINSON

A few evenings ago the Physician's Club of Chicago held a joint meeting with the Press Club of this city, and after an excellent dinner discussed the relations of Medicine to the Press. Both physicians and lay writers were represented on the program, and many excellent things were said and a large amount of valuable advice given. Dr. Woods Hutchinson of New York, the brilliant magazine-writer of popular medical articles, made what was perhaps the most significant speech of the evening.

Dr. Hutchinson came out with the unqualified statement that drugs are absolutely useless; that to take medicines into the stomach with the expectation that these things would modify the course of disease was an anachronism; and it was hinted that physicians of the better class no longer believe in internal medication. The physician of the future would do what the better physicians of the present are trying to do: show men and women how to live; protect them from infection; teach them the value of cleanliness, of fresh air, of exercise, of proper food; and if they became sick, instruct them as to how best to conform their lives to their ailments—relieving their pains, presumably with the hot-water-bottle and unloading their bowels with "corrugated

oats"—supposing (we presume) the trouble something unreachable by the surgeon's knife.

Very beautiful! [Dr. Hutchinson's specialty is magazine medicine; in that branch of our art he stands at the head of the "faculty." We would not for the world cross pens with him, since the keenness of his wit more than atones for any feebleness of argument. But we suspect that the Doctor's experience in the actual administration of medicines to the sick is somewhat limited.

Let us assume that he is right. Certain it is that the therapy of the past has deserved much of the evil said of it. The human stomach has been made the sewer for the most disgusting potions, and things have been given to relieve diseases, which, in too many instances, served to aggravate rather than to ameliorate them. The cramps of colocynth are no more easy to bear than those produced by green apples. The digestion is upset by remedies repugnant to the taste, without having any compensating certainty of action. These remedies have been given without a clear understanding of their nature, and the segregate clinical experience of the "master" has become the therapeutic gospel of the student, to be repeated from generation to generation of textbook, until it has become authoritative and sacred. (Witness the alleged dangerousness (?) of green apomorphine!) The drugs themselves are notoriously untrustworthy: often made of impure, fraudulent or sophisticated raw materials; containing uncertain quantities of active principles in varying proportion—sometimes dangerously toxic, at other times criminally inert.

Is it any wonder that our ancient therapeutics has fallen into disrepute and that even medical men have lost faith in it?

But is the evil said of the therapy of the past to be indefinitely extended to the therapeutics of the present and future? Hutchinson was undoubtedly discussing drugs as he knew them—as they were twenty-five years ago when he left college. Has there been no change since then? Has the future no promise? We know there has been—that there is! The effects of the old-style reme-

dies are not comparable with those of the active principles, given in concentrated and palatable form, free from odor, almost if not entirely free from taste, always identical in strength and uniform in action. With remedies of this kind the physician who understands the condition with which he has to deal and the physiological action of the remedies which he administers, will have no cause to rail upon modern therapeutics. Nor will his patients join the swelling army of those going over to Christian science, new thought, Emmanuelism, Dowieism and the like.

The physician who uses the active principles, giving them according to the dosimetric plan, in small repeated doses to effect, will incite no drug-disease, and will certainly cure in many instances where other men have failed.

Have you, dear reader, found any therapeutic nihilists among those who use the active principles? Can you find a man among them who can not tell at least one story of a life saved by the use of medicines? You know, and we know, that remedies of this kind, properly given, are every day saving thousands from physical shipwreck.

We have one criticism of Dr. Hutchinson's address, and it is this: He left the impression with an influential group of newspaper writers, to be by them disseminated all over the world, that "there is nothing in medicine," and that the physicians who use drugs are either ignoramuses or wilfully deceiving their patients. It is such addresses as these, coming from prominent men in our own midst, which crowd the waiting-rooms of quacks and fill the gilded temples of the healing sects; it is talk of this kind which discredits the doctor and makes him poor. Speeches of this kind do not accurately portray the sentiment of the profession, nor its beliefs in the efficiency of medicine which are based not upon a blind faith but upon *works*.

When men are sick they want help—not good advice. If the doctor has only the latter to offer, or if the impression becomes current that he is only a pretender, a half-hearted "scientist" who is principally in-

terested in the man's disease, only secondarily in the man himself, can you blame that suffering piece of poor humanity for going to someone who bids him hope?

A skilled diagnostician treating chronic diseases has a gold mine.—Austin, "Medical Era."

FECAL TETANUS AND ITS DANGERS

The well-known New Orleans surgeon, Matas, has just published (*Monthly Cyclo-pedia*) a warning against the peril of tetanus from contamination with the feces of the patient.

Next to the feet and hands the regions most frequently affected with tetanic contamination are those subject to direct contact with fecal discharges. In the two cases occurring in his practice he found that the patient had eaten copiously of uncooked vegetables within twenty-four and thirty-six hours before the operation. These had been among those most frequently found by the laboratory to be contaminated with tetanus germs; namely, celery, lettuce, chicory, watercress, cabbage, radishes, turnips, carrots, tomatoes, strawberries, blackberries, and other vegetables, berries and fruits that are grown in the soil or brought in contact with it and largely consumed raw in an unavoidably contaminated state.

The tetanus bacillus and its spores are known to survive their passage through the digestive canal, especially of the herbivorous animals, whose dung is a perpetual culture-ground for them as they are constantly swallowed with grass and fodder. The bacilli are ejected alive and probably with their virulence increased by residence in the favorable conditions afforded by the lower bowel (Sormani). The survival of virulent tetanus bacilli, the resistance of their spores to the digestive juices, the production of tetanus when these feces are brought in contact with wounds of other animals, have been fully proven by Sormani, Hoffmann, Veillon, Sanchez, Toledo, and others.

Five percent of healthy men harbor tetanus bacilli or their spores in their bowels, and the percentage rises to twenty in the case of

men employed about animals (Pizzini). The normal defenses of the body suffice in the majority of instances to protect it against the disease, even if living tetanus bacilli are freely ingested with the food. Occasionally this protection fails; and operations about the exposed regions are then liable to be followed by infection. This may be averted by a little care.

The antitetanic precautions suggested by Matas are, purgation three days before operation, the suppression of all raw food, especially green vegetables, berries and other fruit, for the same period, and when these precautions are impossible the injection of 10 Cc. of tetanus antitoxin subcutaneously at the time of operation.

We have here another and notable illustration of the manner in which professional opinion is veering around to the position we have occupied for so many years. The perils arising from the fecal contents of the alimentary canal, and the wisdom of preventing them by a routine treatment, are becoming daily more generally recognized.

"Clean out, clean up, and keep clean."

PHYSICIANS ARE NOT GODS

If ignorance and puerile judgment could be supplanted in the popular mind by a reasonable degree of rationality, physicians would suffer less uncharitable criticism and unjust condemnation. A man, an ordinary human being, if he has taken a course of medical training, seems in the ordinary lay mind thereby to have acquired some omnipotent attributes, or if he has not done so he ought to, and should then be able to perform miracles. And many times, be it said to his credit, he does accomplish results in the treatment and cure of human ailments which are truly remarkable. But these happy results are attained only by helpful cooperation of the patient and the more gracious beneficence of nature.

One of the most difficult obstacles with which the practitioner has to contend is the lack of cooperation on the part of the patient and inattention to the advice of medical wisdom. This advice, by the way, must be

given upon the instant, otherwise the doctor is set down as incompetent, unlearned, and hence incapable of offering advice or suggesting treatment.

Upon what other profession are the requirements so exacting. Suppose a lawyer is asked a question, does it occasion surprise or presuppose unfamiliarity with law if he fails to answer immediately? By no means. The client is told to wait a few days until the legal light shall have had time to read up on the point, and he goes away satisfied and patiently awaits the cramming-up process undertaken by the lawyer. The architect requires and is granted weeks to study and offer estimates. The theologian takes days and weeks to prepare for the exposition of a single subject. The mathematician and linguist also may temporize to the extent required in the preparation of their daily tasks; but for the physician to demand a little time to give especial study to some obscure case argues him of mediocre rank or absolute inferiority.

What, then, is left to him but the employment of subterfuge in order to gain the necessary time to give especial thought and study to the abstruse point in question?

Then, after the advice is given, in many cases there is no certainty that it will be followed. The patient says: "But, Doctor, that takes too much time," or "It is too troublesome," or, "I cannot afford to rest or stop work." Well, then, what is to be done? The ailment may require absolute rest, and without cessation of work the difficulty cannot possibly be overcome.

Scientific treatment will help, but cure, never, under existing circumstances. The disease drags along. The doctor is constantly harassed and discouraged by the ever-recurring complaint, "I am no better," until another physician is sought and the first one advertised more or less broadly as "unable to cure me, and my money was thrown away." The same experience, possibly modified, is again gone through with until necessity compels a cessation from work or the patient drifts into the consumption of patent medicines, and the ultimate benefits from the treatment of the

physician is ascribed to the patent medicine, whereupon these nostrums acquire another convert and the scientific physician another enemy or skeptic.

We ask in vain for a remedy for these conditions. Never till a broader general knowledge obtains among the laity can we hope for a more charitable and rational consideration at their hands.

Whatever you do, put into it the whole force of your mind, and as you would avoid the waste of time, avoid the wandering of your thoughts, the scattering of your efforts—concentrate, concentrate in all things.

—W. H. Cuttingham.

A COMPARISON OF THE DRUG WITH ITS ALKALOIDS

In a paper published in *Folia Therapeutica* (October, 1909), Sir Samuel Wilks compares the results obtained from the administration of crude drugs with that from alkaloids, arriving at conclusions decidedly to the disadvantage of the latter. The instances brought forward by the author, in support of his position, are very well as far as they go, but they do not go far enough. If, for instance, he "constantly found cases of illness other than those of ague, where the infusion or decoction of cinchona bark was a far-better medicine than quinine," we can only point to the fact that Cushny (quoted in "Alkaloidal Therapeutics," second edition, p. 336) enumerates as constituents of the cinchonas 21 alkaloids, 6 acids, and 3 neutral bitter substances, and that in those cases of illness other than ague quinine was not indicated at all, while some other of the constituent alkaloids were.

The same holds true to a far greater degree for opium, some of the constituent alkaloids of which have an action antagonistic to that of morphine. It is also true for digitalis, belladonna, and for all the crude drugs which the author mentions, as well as for those which he omits.

It has probably happened to all physicians who use the alkaloids in their practice that occasionally these fail and that an infusion or decoction of the drug or fresh leaves of the related plant gives better results. The

present writer recalls a striking case in point, somewhat similar to one cited by Sir Wilks.

This case concerned a man of alcoholic habits who, after a severe injury, developed a high degree of cardiac weakness with general anasarca, etc. Digitalin did not touch the case, while under infusion of digitalis, advised by a consultant, all symptoms promptly cleared up. Had the writer at the time been able to read up on the proper alkaloids to use, the infusion would have been needless and the disease in all probability would have run a far shorter and more benign course.

We mention this instance from our own experience to show that alkaloidal medication is by no means easier than the old galenic dispensing or prescribing. It is not. It requires careful study and painstaking consideration of all indications. But the results justify the extra brain work in being far more prompt and certain, and the principle of small doses repeated to effect assures a sufficient dose while preventing an overdose.

HOW THE OPSONIC INDEX IS OBTAINED

So many inquiries concerning the method of obtaining the opsonic index have been made that the following brief explanation may be of interest to many readers of CLINICAL MEDICINE.

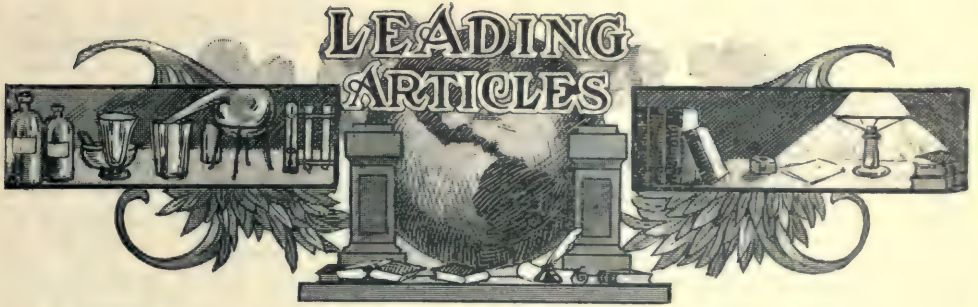
"Opsonins", it may first be explained are hypothetical substances in the blood-plasma which prepare the microorganisms for disposal by the leukocytes. Second, leukocytes performing the function of ingesting bacteria or other foreign substances are called phagocytes; that is, the leukocytes are performing phagocytic action. Third, the normal amount of opsonins possessed by an individual is determined by counting the number of bacteria which are ingested by a certain number of leukocytes in the blood-serum; this being called the phagocyte-count. Fourth, the normal phagocyte-count for most of the pathogenic microorganisms now being a matter of record, all that is necessary is to determine the phagocytic

action of the sick person's blood for any particular bacterium and compare it with the normal standard; this being easily done by any one familiar with hematology and bacteriology. Fifth, the phagocyte-count of the patient having been determined, the "opsonic index" is obtained by dividing it by the normal phagocyte-count for that particular bacillus or coccus.

Thus, if examination shows that in the serum of the patient 240 bacilli of tuberculosis are ingested by 40 leukocytes in a fifteen-minute period, the phagocyte-count of that individual would be 240 divided by 40—that is, 6. Now, in normal blood-serum only 160 of these bacilli are ingested—that is, the normal phagocyte-count for the bacteria of tuberculosis is 4. So the "opsonic index" of the patient is found by dividing his phagocyte-count (6) by the normal phagocyte-count for tubercle-bacilli (4); giving 1.5.

The precise value of the opsonic index has not yet been determined; but since pathologists now believe that greatest progress is to be made in a careful study of changes in the blood and in the therapeutics dependent thereon it is quite likely that our knowledge of opsonins may prove of great value, at least in leading to more definite things based upon known facts instead of theories.

Heretofore study of hematology has been chiefly confined to the various types of leukocytes; but recent investigations by Ward and others show that the changes in the erythrocytes may be of even more importance than those of the leukocytes. Certain it is that we are upon the threshold of great discoveries in the pathology of the blood and the relation thereof to many diseases now quite obscure in nature and of purely empiric treatment. That the field of definite, scientific therapy is soon to be greatly enlarged by certain methods designed to change the condition of the blood can not be doubted by anyone who has kept in touch with recent progress in the study of the blood. What the relation of the opsonic index to this department of therapeutics will be cannot, for the present, be predicted definitely.



Commercialism in Medicine

*Being Somewhat of a Socialistic Preachment. Intended
for Doctors and Other People*

By **GEORGE F. BUTLER, A. M., M. D., Chicago, Illinois**

Head and Professor of the Department of Therapeutics, Chicago
College of Medicine and Surgery

THE world has never seen such an advance along commercial lines as it sees today. Not only is there marvelous progress in business but in every domain of human thought and endeavor. From the beginning of the world progression has been dominant. The constant moving-on has been a fact, and to each, in his particular walk, has been given an incentive to do better than he has done or than has been done before. So century after century and age after age has seen some great development to make that century and that age excel its predecessor. Architecture was developed from simple, crude construction to the wonderful grandeur of the eighteenth century; music, from mere combination of different tones to the exquisite harmony and the powerful, robust, meaningful expression of the young twentieth century; painting, from the inartistic, motionless, meaningless daubs of its infancy to its present apparent perfection in outline and color; medicine, from the incantations of the ancient priests and medicine-men to the present wonderful scientific developments.

Then came the age of invention—progression that was to make possible the things that had been impossible; that was to make unheard-of things do undreamed things; that was to make the earth yield the inani-

mate to do the work of man; that was to make machines, needing but to be watched and fed, do a hundred-fold the work of those who were to watch and feed; that was to veer the minds of men from things beautiful to things wonderful. The brain of one was to invent that brainless others might do the work infinitely more quickly than had been possible before, even by capable hand workers. Nimbleness of hand was to supplant quickness of head. All was to tend, as it has tended, toward indigence, laziness, and the ambition to possess the most by doing the least.

This progression has made possible the accumulation of wealth for the few; greater and increasing poverty for the many. It has made ease and comfort the things to be desired beyond all other things. It has so deluged us with things before unheard of, and so unnecessary, that we have learned to look upon them as commodities rather than luxuries, needs rather than desires.

The Watchword Is Commercialism

The world of today is aggressive. Its occupancy is largely that of commercial enterprise, and in this field in large measure are found the men we are accustomed to consider the strong men of today. In the smaller cities we point with pride to the large factories, to the great stores,

and sing praises to the heads of these, for we know that they are successful, we know that they are strong. In our great cities these establishments pale before the glamour of the stock exchange, and to the dare-devils in these institutions we turn our eyes, filled with a mixture of admiration and envy.

It is the desire to emulate these men, to possess the luxuries of life which wealth can bring that has resulted in the present-day commercialism. But commercialism as it is now generally understood is not commerce—it is not merely the spirit of trade.

Emerson defines commerce as the taking of things from where they are plentiful to where they are needed. Elbert Hubbard says: "We change men by changing their environment. Commerce changes the environment and gives us a better society. To supply good water, better sanitary appliances, better heating apparatus, better food served in a more dainty way, these are the tasks worthy of the highest intelligence and devotion that can be brought to bear upon them. . . . We benefit ourselves only as we benefit others. And the recognition of these truths is what today placed the business man in the forefront of the learned professions—he ministers to the necessities of humanity."

But with all due respect to Fra Elbertus, I would ask who ministers to the happiness and well-being or the life of others more than does the doctor?

The Good Doctor Is a Good Business Man

The really good doctors must be business men—commercial in the sense that they must satisfy their customers—this is commercialism in the highest sense. Instead of adopting the old maxim of the business man, "*caveat emptor*," the doctor's duty lies in these words, "*probus esse ægrotis*," and by being honest with our patients we should conscientiously do our best to relieve their suffering and to keep them, if possible, from becoming sick.

The "commercialism" of treating a patient unnecessarily, of taking advantage of his misfortune to frighten him into being

treated indefinitely or operated on unnecessarily for the sole purpose of extracting a little more money from him, is not "business"—it is downright dishonesty. The physician who prostitutes his profession by frightening and then *literally* robbing the sick is a more contemptible robber than the "footpad." To take unfair advantage of a customer or a patient may be good "commercialism" as the term is generally understood, but it certainly is neither a good business method nor an honest one.

Up-to-date commercialism seems to be, in the majority of instances, a method of dishonest and remorseless money-getting.

A contributor to *The New York State Medical Journal* has put it well when he said: "Only evil minds are willing to use the necessities of their neighbors as a robber uses a jimmy to pry his way into a fortune and possessions rightfully belonging to others. It is not possible to commercialize the learned professions without loss of influence on their part, and society can ill afford a wastage which is as dangerous as it is difficult to replace. . . . The administration of justice, the preservation of health, and the ministration of religion have for ages been occupations set apart. They are all concerned with the fundamentals of life, the things which men hold most sacred and most dear. They cannot be vulgarized without irreparable loss to society. The administration of the law is not a commercial but a sacred function. The care of the sick and helpless is not a sordid trade but a high and holy office. The profession which seeks to give shape and direction to man's longing for higher things, which cherishes his hope of immortality, is influential and helpful in proportion to its dissociation from financial considerations."

Wealth, I know, is, by popular vote, the God of the Universe, and at its shrine is a mighty bending of knees. Money, the antidote for whatever ails us, is the goal, and we would fain bare our heads to the multimillionaires. Money is the pennant, and he is victor who gets it in largest quantity.

The days seem to have passed when method was questioned, for no crime is too

great seriously to interfere with the work of obtaining it.

"A certain ten percent," says an English political economist, "will ensure the employment of capital anywhere. Twenty percent will produce eagerness. Fifty percent, positive audacity. One hundred percent will make it ready to trample on all human laws. Three hundred percent, and there is not a crime at which it will scruple nor a risk it will not run, even to the chance of its owner being hanged."

All the ten commandments fade away like the stars at sunrise, and were there twenty they would fade as easily. Hatred, covetousness, lying, stealing, murder, the robbing of widows, the pauperizing of orphans—all these obstacles are laughed at.

And yet we look upon our men of wealth with admiration. We envy them. We speak of them as our solid, substantial men, and would be used as their door mats could we obtain their favor. Money is the God of the Universe.

They are strong who go in for it and win. Method! Rodents! Rats! Go for it and get it!

This is no idle talk, for should you, reader, nose around a bit and hunt things out for yourself, if would not be an easy task to find one who has accumulated in large measure, as this term implies today, who would be able to unroll to a clean record.

It is a hazardous race, this money getting and one so fascinating that it controls every thought. Those entering in order to hold high position must be very strong. They need strength in quantity to withstand temptation—often the temptation to be honest.

Look at our guiding-stars, the shining marks in the great financial world, men of colossal strength, courageous, determined, selfish, broad yet narrow, merciless, conscienceless, successful; their whole lives keyed to the highest pitch, their souls focused upon investments, bank accounts and greater accumulation; their lives crowned with a victory greater than they hoped—all this, but nothing more. And Death just blots them out, separates them from their accumulating,

leaving them as life found them. They have accomplished nothing that is of any value or that will not die with them, except in rare instances, as in the case of a Rockefeller, who gave Chicago her great university and to the world that beneficent institute for medical research; but all this from the surplus of his income; and then a Carnegie, who established public libraries in many, many cities, principally for the purpose of dissipating his great fortune while yet alive, and incidentally desiring to be called a philanthropist the time he has ears to hear. But even these two are giving without effort or sacrifice of the truck they do not need, and while they are on the last laps of their journey.

True, all these men are of value to humanity. This I do not deny. They have created great industrial enterprises; they have made possible the handshaking of the East and the West; they have opened up the earth, giving to us its hidden treasures—the coal, the oil, the metals; they have made employment for countless thousands of men.

Still, we have no possible reason to thank these men for these things. Indeed, I doubt whether thought of thanking them has ever entered the mind of anyone, for neither charity, philanthropy, nor even kindness, has entered into their dealings as manufacturers or employers. Their whole lives have been devoted to commercialism, and with keenness, shrewdness, oneness of purpose and desire, they have used humanity as they have been best able and for their own personal advantage.

Selfishness Is Their Motive

If these financial giants have done good to the world, it was because doing good has been necessary to their own success. It has not changed their methods or ambitions when evil has resulted. They have strength—the strength to concentrate and act; the strength to realize their ambitions; the strength to jump over or sweep aside all obstacles. We admire it and envy it as we admire all things powerful; but it does not warm us, for it is cold, calculating and fearful. It is cruel, annihilating strength.

And the libraries of Andrew Carnegie, magnificent structures though they are, impel one to feel that they were thrown at the people to gratify another phase of that selfish ambition of the donor, for he was determined that they should be monuments to him. "Carnegie Libraries—Immortal Structures!"

Yet this same man, and the patron of the University of Chicago, and the other gods of the money-world, lovers of humanity for what they can profit by it, would pursue identically the same course should something happen. And it is this: Should diminution of income seem probable, they would correct it forthwith by cutting the lesser incomes of their subordinates—their cattle. It would be their right because of their strength; and criticism, censure, condemnation would be of trouble only to those who would kindly offer them.

But there is another class of strong men—strong as these others, but in a different way. They are less pretentious, seldom rich, very often even poor. Yet these are the ones whose strength is of real and lasting service; who often suffer that others may be benefited; who give the best that is in them that good may be the result. "For the good of others" has ever been their aim, with no thought of reward for themselves save the recognition of the world that they have done something of *real worth*.

In the field of invention we think of Fulton, Cooper, Franklin, Morse, Edison, and the many others who have spent their lives in the advancement of science that those living and those yet to be born may reap the benefits.

In the field of medicine we recall the names of Virchow, Koch, Jenner and Grenfell, to say nothing of the thousands of nameless country doctors, like Doctor MacClure in "Bonnie Briar Bush," who are doing what they can to help the sick and distressed, with no hope of fame or great pecuniary reward.

Then in the field of literature we will find the names of many, strong, courageous and noble, whose work has been of inestimable value to mankind, uplifting, inspiring, and

making more beautiful the world in which we live. Who will say that Tolstoi, Morris, Emerson, Henry George, Ruskin, Thoreau, Maeterlinck, Whitman, were not men of strength? And who will not say that their strength is the strength of value, the strength that warms, comforts and does good?

And who will not say that the thoughts, and the words, and the deeds of these and their brother workers are the sunlight dispensed by those who love? Ah, how different are the strong who have become strong in *doing for others* than those who have become strong in having others do for them. This is the strength that, it seems to me, is Strength—deserving of all praise, and far more worthy of emulation than the strength of those who have accumulated only wealth, and that by means of shrewd selfishness.

Poverty Must Not Be Glorified

But I do not wish to belittle the value of money.

It is easy to point out the dangers resulting from a too intense devotion to money-getting, but whatever may be said of the dangers of riches the dangers of poverty are tenfold greater. A condition in which one is exposed to continual want, not only of the luxuries but of the various necessities of life as well as to disease and discouragement is exceedingly unfavorable to the exercise of the higher functions of the mind and soul.

The poor man is hourly beset by spooks of temptation which the rich man never knows. Doubtless the highest virtues are sometimes found to flourish even in the soil of poverty. Not only industry, honesty, frugality, perseverance amid hardships and ever baffling discouragements, but much more miraculous attributes, as meek contentment, severe self-sacrifice, tender affection, unwavering trust in Providence, all are found blooming in the hearts of the poorest of poor—even in the sunless regions of absolute destitution, where honesty might be expected to wear an everlasting scowl of churliness, and a bitter disbelief in the love of God to accompany obedience to the laws of man. But it is the most insufferable of all things to hear these qualities spoken of

as if they were indigenous to poverty, when we know they flourish in spite of it.

¶ We have had enough of that silly sentimentalism which would canonize the poor, because they are such. Poverty is a condition which no man should accept unless it is forced upon him as a necessity or as the alternative of dishonor. No person has a right voluntarily to place himself in a position where he will be assailed hourly by the fiercest temptations, where he will be able to preserve his uprightness only by a strength little short of angelic, and where he will be liable at any moment to become by sickness a burden to his friends. Every man, too, should make some provision for old age, for an old man in the poorhouse or begging alms is a sorry sight and suggests the suspicion, however ill-founded, that his life has been foolishly spent.

Money the Main-spring of Action

I say, therefore, that the philosophy which affects to teach us a contempt of money does not run very deep. Indeed, it ought to be clearer to philosophers and to other men that money is of superlative importance, and that its importance increases with every successive generation.

It is money, or rather the want of it, which makes men workers. Money is the appetizing provocative which teases the business-nerve of more than half the world; while most of the results of ingenuity, skill, intellect, tact, address, and competition, depend upon its unremitting pursuit. Want of money is the great principle of moral gravitation, the only power that is strong enough to keep things in their places. It is this scantiness of means, this continual deficiency, this constant hitch, this perpetual struggle to keep the head above water and the wolf from the door that keeps society from falling to pieces. Let every man in the community have, as a rule, a few dollars more than he wants, and anarchy would follow.

As civilization advances, human life becomes more and more significant, richer in opportunities and enjoyment. Science is multiplying with amazing rapidity the comforts and luxuries of life and the means of

self-culture, and money is the necromancer by which they are placed at our disposal. Money means a tight, well-built house, the warmest clothing, the most nutritious food, the best medical attendance, books, music, pictures; a good seat in the concert- or lecture-room, in the cars, and even in the church; the ability to rest when weary in body or brain; above all, independence of thought.

Every step in life is conditioned on "the root of all evil." You must pay to eat and drink, to sleep, to house and to clothe yourself, and even to breathe. Every breath is a consumption of carbon, which must be paid for as inevitably as the coal in your grate. The creditor is at every man's heels, dogs him in his last moments, and hardly stops short at the graveyard gate.

Not only is money thus indispensable, but the value of this representative of values was never before so great as now. With this talisman a man can provide himself with richer means of enjoyment, secure a more varied and harmonious culture, and set in motion grander schemes of philanthropy in this twentieth century than at any other previous period in the world's history. And precisely because it means so much, because with it life is so rich in possibilities, the want of money was never before so keenly felt as now.

Want of money is the almost universal disease, which alone will explain the weight and sadness which one so often finds in the social atmosphere.

Let us, then, abandon the affectation of despising money and frankly own its value. Let us admit even that more persons are ruined by underestimation of the value than by greed of money; that even in our great cities, where life is at white-heat, and men stake body and soul on the prizes of the stock-board, there are twenty men who need incitements to industry and frugality where there is one who needs to be checked in the pursuit of riches. But let us remember the danger of forgetting the ends in the means, and attaching more importance to gold itself than to the things which it will purchase.

The owner of capital is but a kind of head bookkeeper or chief clerk to the business community. Though rich as Carnegie, he can neither eat, drink, nor wear more than one man's portion of the good things of life. Rockefeller, whose wealth is counted by hundreds of millions, is, after all, only the steward of the nation, and however selfish, grasping or miserly he may be, he is compelled, even when he least desires to do so, to use his accumulations for the public good. His money-making talents enable him to employ profitably the capital, which soon would melt away in the hands of a spend-thrift or a financier, to promote the common welfare.

The Right and the Wrong Valuation of Money

Money is a good thing which every man should try to secure in order to avoid dependence upon others, but it is not so good a thing that, to win it, one should stoop to a mean or dishonorable action or give his conscience a single pang. Money getting is unhealthy when it impoverishes the mind or dries up the sources of spiritual life; when it extinguishes the sense of beauty and makes one indifferent to the wonders of nature and art; when it blunts the moral sense and confuses the distinction between right and wrong, virtue and vice. Money getting is unhealthy when it engrosses all one's thought, leads a man to live meanly and coarsely, to do without books, pictures, music, travel, merely for the sake of greater gains, and causes him to find his deepest and most soul-satisfying joy, not in the culture of his heart or mind, not in doing good to himself or others, but in the adding of dollar to dollar in the knowledge that his riches increase every year, that he is adding bonds to bonds, mortgages to mortgages, stocks to stocks, and may say to himself, "Soul, thou hast much goods laid up for many years."

There is, indeed, no more pitiable wretch than the man who has mortgaged himself, soul and body, to money; there is no more painful spectacle than to see a man dragging his manhood at the heels of his employment, losing a life for the sake of the means of liv-

ing, disregarding the celestial crown held over his head, and raking to himself the straws, the small sticks, and the dust of the earth. The poorest of all human beings is the man who is rich in gold but intellectually and spiritually bankrupt. After the utmost that can be said of the necessity and value of money, it still will remain forever true that life is more than the means by which it is sustained, more than dwellings, lands, merchandise, stocks, bonds, dividends; more even than food and raiment. All things are for the mind, soul, the divine part within us; and if this, our true self, is dwarfed and starved, the most royal worldly possessions only serve to set forth by contrast deep poverty and servitude.

Let everyone who wishes to get on in the world justly estimate the value of money. Let him neither, on the one hand, make it the only aim of success, nor, on the other, affect for it a philosophic contempt which the necessities of life will compel him to unlearn. Let him neither strive for a mere living nor for a great fortune, but gather gear, as Burns says,

. . . By every wile
That's justified by honor;
Not for to hide it in a hedge,
Not for a train attendant,
But for the glorious privilege
Of being independent.

At the best, life is a battle royal in which each one engaged hopes, at some period, to win out. The desire is real to excel in whatever field he may be engaged.

Ambition, Honorable and Sinful

The physician dreams of a discovery in the field of medicine; the merchant looks toward a great establishment; the painter would do the work of Rubens or Rembrandt, or Millet; the musician would surpass Chopin or Mendelssohn; the literature looks to Thackeray or Dickens, Ruskin or Emerson; the laborer imagines that some day he may be the employer. All have ideals: all look forward to some day stepping out and up, to better their own conditions, to advance their profession, or to better the conditions of those around them, by some new thought, system or discovery.

And such an ambition is truly admirable, but only so when honesty of purpose guides in the development.

But sadly true it is that selfishness cuts in slowly at first, only to grow until it overpowers. Honesty of purpose becomes determination for gain, and the beauty of it all is swept aside by the desire for wealth that will make ease and luxuries possible. Then indeed is there danger—for the temptation is great, and easily fallen is the tempted. The end to be attained is alluring and far more nearly within reach than that to be made by hard, never-ending and often unsatisfactory struggle for honor, fame, or even acknowledgment in the world of science, letters or art.

Ambition is a sin when the mind becomes warped and twisted by selfishness. Its energies are bent toward shrewd, calculating sharpness. Honesty has become a secondary principle; friendship is an unknown quantity; brothers are enemies. Narrowness, treachery and absolute dishonesty are factors often brought into active use both in business and professional life.

In business, in the professions and in art wealth is first considered. By it success is measured. They are the ideals of those who have accumulated. That is entered into most largely in which wealth is most easily obtained. Sentiment cannot exist, love is foreign, honesty is an after-thought in present-day commercialism. "Business is business."

Pessimistic? Not a bit of it.

For proof positive look upon those who have kept their heads above their ken in this accumulation business; at those "successful" in business and in their profession. You will discover that the policy of Self—self first and always—has been religiously followed.

In mercantile affairs—and nowhere is there better opportunity for good, true, honest work—they who have realized their ambition and attained the remarkable success that may be seen in our great establishments are the ones who have not scrupled in their efforts to "get there." I refrain from commenting on certain "successful" physicians. Hard, cruel, cold-blooded business

competition, the bane of civilization, has cut out the pace for the slashing, killing, do-your-neighbor work. The motive seems but that the few may trample under foot the many; that the big dog in the fight may down the smaller one.

Whose Is the Blame?

But these "successful" ones are not to be blamed for their success. They are but in keeping with today. You and I are more or less at fault, for we are the ones who make these things possible. We purchase of them in the spirit in which they sell to us; we are trying to buy cheap goods, cheap medical attention, cheap everything; trying to get the best of the merchant, the doctor, the lawyer, the artist, the writer. Their motive is as ours. Their effort is to give us the least for the most; our effort is to get most for the least. Thoughtlessness and selfishness, or perhaps thoughtless selfishness unacknowledged, but existing nevertheless, prompt us in our dealings.

Shameful is it that such conditions exist; that there are prosperous establishments paying insufficient wages and with the knowledge that they *must* be supplemented to insure clothes, bed and food.

This condition does exist, for in every city of importance may be found proof of it, and to it may be traced, in large measure, the immorality often necessary to life, especially in the young women of our stores.

Shameful, too, that there can be found conscienceless, rapacious lawyers and doctors who disgrace their profession by taking advantage of their unfortunate clients in order to make a few more dollars!

But speed the day that may come when we shall understand that there is no virtue in an article or in professional advice when it is cheap; that quality is of far more importance than quantity; that a good article always commands a good price; that labor is a price-regulator the world over.

And speed the day, too, when men and women will consider the method of production; when sweat-shops will be things of the past; when department stores, factories, and all other establishments will be con-

ducted on humane principles; when wages will be given those at work sufficient to warrant their living without crime. And speed the day also when it will be possible for every one to do the work he *loves* to do, and not that he *has* to do; when hand and heart shall work together, making every portion of his labor consecrated by Love.

Then, and not till then, will Commercialism be characterized by Idealism, will retrogression have ceased and true progression begun. Then will success in commercial and professional life be possible to those honest, straightforward and unselfish. Strength to live up to our highest ideals is what is most needed; the strength to do; to uplift; to inspire; to help; to be unselfish; to be noble; to *be honest*.

These are a few things we need to inject into commercialism, and if we do these things we shall be successful and happy, for we shall be working for the happiness of

others. The creating of happiness is the greatest thing in the world. It is the work of the Strong Man. It is Strength itself.

In closing I can say no truer words than these:

"We have come to the parting of the ways. One way is easy to tread. It is the path of the self-seeker and the man whose eyes are ever close to the earth. 'Fill the purse' is his motto. The end of that path we cannot see for it vanishes in mist and gathering clouds. The other path is not easy. It requires self-denial, self-control, lofty thinking and right living, but it leads to the stars, and the man who treads therein shall lie down for his final rest with a stout heart and a calm and contented mind. The profession which treads this path shall earn and hold the respect and love of mankind, and its glory shall shine like the stars, forever and forever."

Handling the Cholera in the Philippines

*The Difficulties of an American Sanitary Officer in the East—
and How He Overcame Them*

By THOMAS E. MOSS, M. D., Bontoc, Mountain Province, P. I.

President Board of Health and District Health Officer of the Mountain Province

YOUR letter, asking me to write something for CLINICAL MEDICINE was forwarded to me at Tagudin where I had gone in response to a request from the municipal president asking me to come to that town and see what I could do toward getting the town clear of an epidemic of dysentery and measles which was killing off the children and the aged.

Tagudin and Its Troublesome Typhoons

The town of Tagudin is situated on the coast and is the gateway to the Mountain Province; it is where most of the supplies for the province are unloaded from the ships, though there is another coast town some twenty miles farther north where the larger and more timid ships discharge their cargo, for there is no harbor at Tagudin, only an

open coast, and the big ships are afraid to come in, since there is nearly always some fool typhoon chasing around over these islands and the China Sea, and this is liable to strike anywhere, and if this happens to be the case when one of the large ships is discharging her cargo at this place she is pretty likely to go ashore as the swell is very heavy on account of the depth of the water at this place.

Tagudin and the surrounding country is peopled with one of the worst set of Filipinos to be found along the entire coast; they are mean and hard headed, and above all are averse to sanitation, which, of course, is my specialty in my present capacity, and in fact right in Tagudin was the battle-ground of my first fight with the dreaded Asiatic cholera.

On November 6 I was borrowed from the Philippine Constabulary by the Bureau of Health of the Philippine Islands for the purpose of taking charge of the cholera situation at Tagudin, which was pretty bad and seemed to hang on in spite of everything that could be done. I arrived in Tagudin, November 8, 1908, and found the disease scattered all over the country, in the town and out in the *barios*, showing that no headway was being made toward quarantining it and getting it confined.

Cleaning Up the Town

I immediately went about getting the town cleaned up, which was no small matter as there had recently passed over this place one of the "aforementioned" typhoons, leaving it in a very bad condition. For about ten days before the typhoon struck it had been raining steadily up in the mountains of the interior and all the rivers were overflowing. When the typhoon began to blow in from the ocean and bank up the waters the town was quickly flooded, the water rising to a depth of five or six feet on the plaza, which is always the highest spot in these towns and generally is in front of the invariably present catholic church. Right here you can see some good these churches do in this country, for in times like this the people go there for refuge. (I can not stop here to take up the subject of churches in the Philippines, for that is a story in itself. Suffice it to say that they are all right and especially the Belgian fathers. I have never met a nicer class of men.)

In this instance the people of the town all managed to get to the church and stayed there until the flood subsided. This is about the only good thing one can say of a typhoon, that is, it does not last very long, in fact could not, for if it did there would be nothing left, since it annihilates everything.

When the water disappeared it left the town covered with drift to the depth of four feet. This drift had been brought down from the mountains; there were great logs which had lain for years in the interior, from whence it would have been impossible to remove them in any other way except by the

water. Not only were these great logs and trees brought down but every bridge which crossed the mountain rivers was torn out and the timbers came down and were stranded in the town when the water went down.

Unsanitary Conditions of the Town

All this drift left the town in a very unhealthy condition as you can imagine, and it had to be cleaned up and burned. Then closets had to be provided and the people instructed how to prevent the taking of the disease, as by boiling the drinking water, thoroughly cooking all food, eating nothing raw, etc., all of which they very promptly forgot or refused to do. However, by quarantining every house and all persons exposed I finally got rid of the cholera, but not without a great deal of work and much annoyance, for the people did everything they were told not to, and nothing they were told to do, unless they were compelled to obey.

On one occasion I had quarantined a house in one of the *barios*, some five miles out from the main town, where a woman had died. I had stationed police guards around the house to prevent those who had been exposed from going out and to keep those on the outside from entering, but not being satisfied with the way things had been going and the continued spread of the disease I went out to the house during the night to see how things were progressing. I found that the police had left the house and gone to another part of the *barios* to sleep, while inside of the house, laughing and talking, I found about twenty people who had come all the way from Tagudin, five miles distant, to see the dead woman, knowing perfectly well the nature of the disease, and knowing that they were acting positively against my instructions.

I immediately quarantined the whole lot and called for constabulary guards. I did not trust the police any more during the epidemic. Consequently I soon had the disease "out of commission," only one case developing after that. This other case is worthy of mention because it shows some other things I had to contend with.

One evening, about four days after this incident just reported, I was notified by one of my sanitary inspectors that a woman had just died in a house in the main town. On going there I found a typical cholera corpse, and on inquiry I elicited the information that the woman had been sick only an hour or so, that she had come in from the rice fields at one o'clock and died immediately, it being about three o'clock when I saw the corpse. I quarantined everybody I could find in and near the house after disinfecting it and then set about finding out the truth, for I did not believe the woman had died so suddenly, since it was near the close of the epidemic, when one would naturally expect to find a milder form of the disease.

On investigation I found that the woman was the "*carida*" of the vice-president of the village, that she died at daybreak that morning, but had been sick since the evening of the day before, that the vice-president had been to the house frequently and knew all about the case. I sent a policeman for him and threw him into quarantine in the infected house and kept him there for four days, and would have put him in jail, but as I had some of the police force in custody at that time I was afraid that if I kept on and got all of the officials in the jug there would be no one left to run that part of the Province with, so I gave him a "good cussing" and let him go.

This goes to show the troubles I had, for who would suppose that a Government official would hide a case of cholera and let people go in and out of an infected house, besides going there himself, then go to his brother-in-law's house where there were a lot of little children; but the Filipino is a funny combination. He says, "I wont die until *Dios* wills it, and I can not die but one time, so —no importe."

Of course all this happened nearly a year ago and I intended to write you something about it then, but after getting rid of the epidemic I resigned from the Constabulary and accepted an appointment with the Bureau of Health as District Health Officer of this, the Mountain Province; and as this is, comparatively speaking, a new province,

I have had my hands more than full ever since I have been here.

The whole thing had to be organized and set on a firm basis, and as my jurisdiction is about two hundred miles long by ninety wide I have to move and keep moving, and the moving is not easy, since the whole province is mountainous, and some of the mountains are eight thousand feet high, where two blankets are not too much to sleep under. Also, some of the trails are killing in more ways than one.

The Danger of a Mountain Trail

One way was forcibly brought to mind the other day when I returned from Tagudin, where I had been called to look after an epidemic of dysentery and measles. I received a telegram, stating that an accident had occurred in one of the road-camps down near the end of the trail, near Tagudin, so notwithstanding the fact that I had just come from there I had to turn round and go back and found three dead men and eight wounded. These men had been at work up on the face of a high cliff, drilling holes preparatory to blasting out a place for the trail which had been carried out by the typhoon which almost destroyed the town of Tagudin.

While these men were drilling, about two tons of rock began to fall from above them, and in trying to get out of the way some of them pushed others off to their death below. Others in turn fell themselves, sustaining more or less severe injuries. This particular cliff or mountain side is very dangerous, for the formation is not solid but consists of fragmentary rocks, so that when a blast is set off the whole mountain side is loosened to some extent; and although after each blast the loose rocks are cleaned off from above to prevent just such an accident, it is not always possible to leave it safe, for now is the rainy season and even though a rock seems to be stuck fast a little rain will loosen it and make it liable to slide at any time.

This trail from Tagudin to Cervantes is one of the most beautiful bits of scenery I have ever seen, as it begins at the seashore

and gradually rises for forty miles to a height of five or six thousand feet, passing up a valley and zigzagging up the mountain side, through a tropical forest and the most varied and beautiful variety of flowers and ferns that can be imagined. There are orchids and beautiful plant-parasites of every description—there are begonias, tree ferns, birds-nest ferns, strawberries, raspberries, morning glories and everything imaginable—all can be found in the greatest profusion at some stage of the trail. Then, when the top of the highest point is reached, one may look back and catch a glimpse of the China Sea in all its glory.

As one passes through the cut in the top of the mountain the scene changes abruptly, looking down on the city of Cervantes. The smell of pine is sweet in one's nostrils, yet on the slope up which he has just come there is not a sign of pine, nothing but tropical forest; but on the top and over on the Cervantes side the great pine trees begin, and they are found on this side down as far as the climate will permit them to grow. The descent is abrupt—nearly straight down—and it only takes three hours to make the descent.

One may stand on the top of the divide and look back to the coast and see nothing but vine-clad, tropical, timbered mountains, then on turning around and looking toward the interior he sees a forest of pine with no undergrowth—nothing but a carpet of pine-needles, and at certain times of the year great clusters of mountain lilies, which are perfectly white and almost the counterpart of the Easter lily at home.

Abrupt Changes in the Philippines

This abrupt changing of scenery is not uncommon, nor is this kind of thing limited to the scenery, for ever since I have been over here I have noticed it, especially with regard to flowers, birds and butterflies; the colors will change from bright red to bright green, and there will be no shading to soften the effect—one color will stop and another

begin, and sometimes it is the most bewildering thing imaginable. I have often wished I had time to make a collection of the butterflies especially, for there are thousands of them, of the most variegated colors one could imagine and of every size and description. Some that I have seen are nine or ten inches in diameter, that is from the tip of one wing to the other.

Rice Cholera

This butterfly business is rather out of place in a medical journal so I will get back to things more appropriate. I can not promise to stay there, but you may rest assured that my everyday work will be along medical lines, for it is the time of the year here in the mountains when the tribes are suffering from epidemic dysentery or, as I have named it, *rice cholera*, and I think this a better name for the trouble which begins at the rice harvesting time when the people are celebrating the *rice canao*, eating and drinking to excess, and especially eating the rice which is left in the jars after the "*bobud tapoy*" has been drunk.

This alcoholic drink is made by roasting a quantity of rice and putting it in a jar with a little yeast made of rice flour. This is allowed to ferment for a few days and is then drunk, and when fresh it is a very pleasant drink, sweet and mild; as it becomes older it contains a good percentage of alcohol and a little later is vinegar. It is drunk in every stage, and the rice which remains at the bottom of the jars is eaten. This, with new rice half cooked or raw hog meat, makes, or predisposes to, the disease, "*rice cholera*," which kills so many of them.

I have not thoroughly investigated this disease, only so far as the treatment goes, which is simple. A mixture of bismuth, sulphocarbolate of zinc and camphor will cure it in a short time, with the stimulants necessary in the algid stage. The disease is communicable and resembles true cholera in many ways.



Some Cases of Perineal Rupture

With a Description of the Technic

By W. H. MAYFIELD, M. D., St. Louis, Missouri

Surgeon to the Mayfield Sanitarium

PERINEOPLASTY is an operation for the restoration of a lacerated or ruptured perineum. Twenty-six years ago I began to do this operation after the method of Lawson Tate (Birmingham, Eng.), because I believed his to be the best method in vogue at that time, still, at the same time I could not convince myself that preserving any portion of the cicatricial tissue involved was the proper thing to do, nor that the stitches should show in any part of the denuded surface. After much thought on the subject and a large number of operations I formulated the operation since known as the "Mayfield method."

Technic of the Mayfield Method

This operation, briefly, consists in making a diamond-shaped denudation of all the lacerated parts, leaving the muscles of either side evenly excised, so that their ends coaptate readily when the first, or primary, stitch which circumscribes the entire denuded surface is brought together. Silkworm sutures are introduced and carried around the entire denuded surface in the same way as the first stitch. Then the primary stitch is tied and the silkworm sutures close the wound. If, however, the bowel is also ruptured, then its margins are denuded and catgut sutures are introduced, armed with a needle on each end of the suture, one needle being introduced on the right side of the wounded bowel, the other on the left. The suture is tied subcutaneously, the knot and end of the thread being within the rectal canal. Like sutures are introduced and tied as introduced, until the rent of the bowel is completely closed. Now that the rent in the bowel is repaired, and the perineal tear having been previously denuded, the perineal stitches are introduced and tied and the operation is complete.

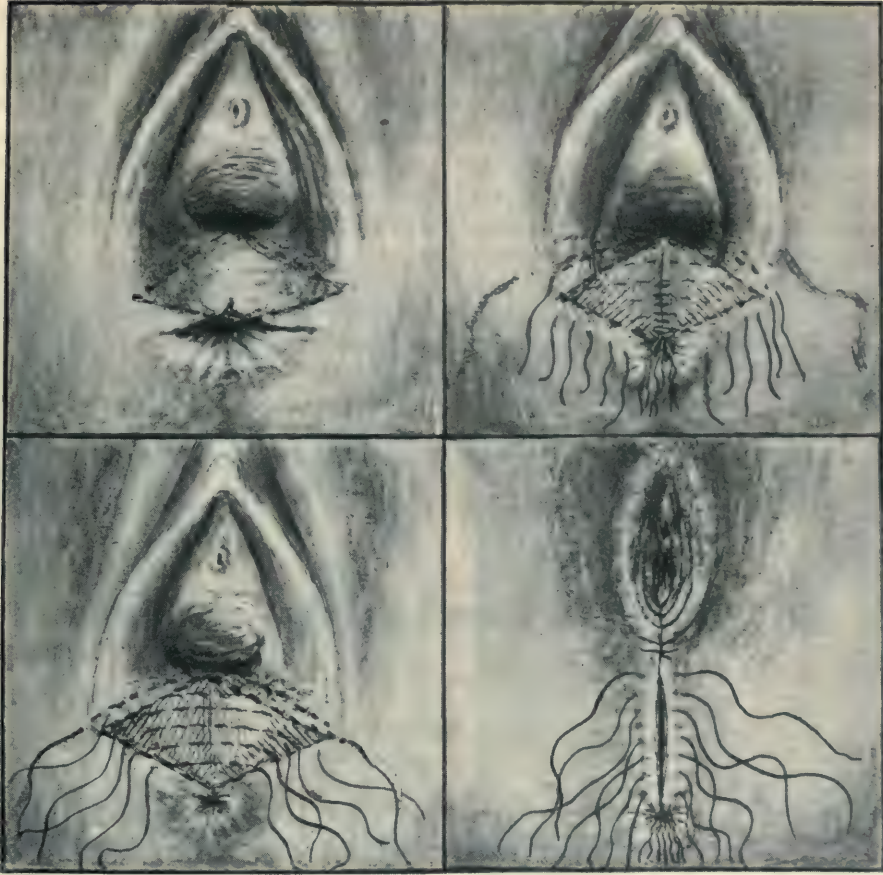
The technic of this operation, if well followed out, is simple and complete, and recovery of ninety-and nine out of a hundred cases can be expected unless constitutional or other diseases interfere.

This operation, having a diamond-shaped denuded surface, admits of the approximation of the lateral margins perfectly. The stitches are allowed to remain from five to six days, the parts being irrigated with dioxigen and this followed with a douche of lysol daily, or twice daily if need be. Adduction and tying of the knees together are entirely done away with, and abduction is substituted. In three or four weeks the patient is well and ready to go home.

Claims for Priority

In 1895 I read a paper on the subject before the State Medical Association then in session at Hannibal, Mo., in which I described and illustrated my method. (See "Transactions Missouri State Medical Association," 1895, beginning at page 335 and including the twenty pages following.)

About that time another operator began doing an operation similar to mine, but entirely too late to claim priority to my operation, as I had then completed 329 operations after this method. In discussing my paper Dr. I. N. Love of St. Louis said: "There can be no question as to Dr. Mayfield's claim to priority in the operation he advocates. This statement is made because recently another operator has declared himself the originator." Dr. Love said some of Dr. Mayfield's cases were reported to the St. Louis Medical Society at least five years prior to 1890, long before anyone else had ever attempted this method. "Justice to Dr. Mayfield," he concluded, "demands recognition of his rights to whatever praise is deserved for this mode of treatment of lacerations of the perineum." I have now



A graphic illustration of the different steps in Dr. Mayfield's operation for repair of the perineum

performed over sixteen hundred operations after this method.

Some Cases of Perineal Repair

I could fill many pages with exciting and interesting cases under this head, as it has been the larger portion of my surgical work, with results so satisfactory to myself and to my patients that I now seek to impart its worth to others.

A lady, Mrs. M—, aged 50, residence, Missouri, wife of a high official, mother of four children, had her perineum completely lacerated at her last parturition. Her mind became greatly disturbed though she was mentally and physically strong, and finding herself totally disabled for life, she became very eccentric, which after years of suffering resulted in separation from her husband—

a most pathetic case. I operated after the Mayfield method, which resulted in a complete restoration of all the functions, a tranquillization of mind, and a reunion with her husband.

I cite another like case whose condition had so upset the wife's mind that she had been confined to an insane asylum, being more eccentric, however, than insane. She was permitted to leave the asylum and came directly to me for operation, which, after due preparation, I performed with the same success as in the foregoing case.

Still another case is that of Mrs. M—, residence, Texas, aged 26, wife of a merchant. She was completely lacerated at her first parturition, the rent extending three inches up the bowel. She had been operated on five times before she came to me, but each

time the stitches had sloughed out. She became hysterically nervous and spent much of her time crying, having no hope for future usefulness. A lady who had been similarly injured and afterward cured at our institution urged her to come here, persisting, and finally coming with her. After much hesitation she submitted to my operation, which proved entirely satisfactory, completely restoring the bowel and vagina. Since then she has borne three children, coming here for each confinement, as have many other ladies upon whom I have operated. She is a grateful and happy woman.

This paper is purposely short, as I only wanted to call attention to the simplicity of this method and the ease with which it

can be performed and with which the wound is hygienically cared for from the start, and to the quick results obtained. I don't think any physician needs to see more than but a few operations of this kind until he can do the work with perfect ease. The after-treatment of course is of great importance, the stitches all being inserted between the rectal surface posteriorly and beneath the denuded surface anteriorly and therefore hidden from sight or buried except where they merge from the margin of the wound on either side, thus rendering a union by first intention sure when the vagina and external parts are thoroughly cleansed night and morning, as before directed.

Infantile Myxedema, or Cretinism

With the Presentation of a Case

By H. D. RYMAN, M. D., Vernon, Illinois

THE patient, Pearl C., is a female 4 years old. The family history is negative, except that there is a fair possibility of phthisis on the maternal side. There are two brothers and four sisters, all being normal in every way, and all are healthy except one brother, aged 15, who presented nearly all the symptoms of an incipient tuberculosis this summer but responded readily to treatment.

The mother received quite a nervous shock at one time during the period of gestation, the father happening to sustain an accident in which his leg was broken. I mention this in passing only in order to say that investigation seems to have conclusively proved that the mental and physical integrity of the child in afterlife is not to be influenced one way or the other by such mental impressions. The physical or mental condition of the so-called "marked" child can be explained upon a reasonable basis if carefully investigated.

The parents first began to notice that something seemed to be wrong with the baby

at about eight or ten months of age; since which time they had continuously tried to do something for it, though with little if any success, until about the first of this year, when for two or three months it received no regular treatment, remaining in about the same condition all the time.

The condition of the child at the time of my first examination was that of a typical, well-developed infantile myxedema, or cretinism.

The baby weighed 19 pounds; could not crawl or sit alone; had eight or ten irregular and poorly developed teeth; constant ptalism; could not make wishes known; was dull, apathetic; had to be fed, being utterly helpless. From the mother's description the child seemed to be troubled almost constantly with bronchitis. The bowels were irregular with a tendency to constipation. The pulse was sluggish, beating about sixty to seventy times per minute; temperature 97.5°F.; abdomen very prominent. The child was restless nearly all the time and slept very poorly, waking almost every morn-

ing at about 4 o'clock and staying awake the rest of the day. The first picture will show the general physical characteristics better than I can describe them.

Treatment and Later History

On April 11 I began by giving one grain of desiccated extract of the thyroid gland of

a fight with an attack of whooping-cough, which she proceeded to handle with remarkable vigor.

The second picture was taken on June 20 about ten weeks after treatment was instituted, and about four or five weeks after the beginning of whooping-cough. At this time the cervical glands were enlarged and the general physical condition such that I



The patient before treatment



After the baby had been under thyroid ten weeks

the sheep daily for three days, and increased the dose by one-half to one grain after every three-day period, watching the child carefully after each period for any untoward symptoms, until she was getting 6 grains daily in divided doses. Up to this time she had been doing nicely, was changing perceptibly from week to week, but now she began to be a little restless and nervous, so I reduced the dose to 4 grains daily. A little before this she took out a contract for

took her off of the extract for ten days, and began giving syrup of ferrous iodide in 5-minim doses three times a day, continuing this for about two weeks with excellent results as to the general condition and marked alleviation of the paroxysms of coughing.

We resumed the extract after leaving it off for ten days, but after a week's treatment the emaciation seemed to get worse instead of better, so we left it off again. After four weeks of nontreatment evidences of the

characteristic facial expression and mental dullness again began to be noticed.

We were now up to the proposition of definitely determining just how much of the extract is necessary to this child's system, in order that the proper metabolic equilibrium be maintained. I began to give one grain of the extract three times daily continuously for about eight weeks, obtaining a regular gain in weight, appetite, strength, intelligence, the full development of all the teeth, and the acquirement of two or three words.

There have been two periods since of one week each when she did not receive any of the extract.

Two Important Points

The above is a fairly complete summary of the case, its treatment and course up to the present time. The two important points remaining for our consideration are: how much of the extract is necessary to the child's system, and, what is of greatest importance to the parents, the prognosis.

Some authors advise the intermittent administration of larger doses for a few days or a week, with three to five weeks' intermissions. Personally I believe that the regular administration every day in dose just enough, just as Mother Nature would do it herself, would prove more satisfactory.

The prognosis I believe to be very favorable as to the physical development, and guardedly favorable as to the mental development.

In the study of diseased conditions it is necessary that we should understand as nearly as possible the physiology, etiology, and pathology of the same, in order properly to understand the various symptoms with their proper interpretation, and to be able to give intelligent therapeutic advice.

The Action of the Thyroid—How Explained?

The physiology of the gland, up to the present, is not enlightening. The etiology of the hypo- or hyper-activity of the thyroid is likewise uncertain. The proper understanding of the pathology of a necessity must be lacking until the first two points are made

clear. Our treatment of the conditions must, therefore, be empirical, which to those who like to know just what and why they do a thing is anything but satisfactory.

How does the thyroid gland wield its wonderful influence upon the metabolism of the body?

Does this influence begin before or after birth?

Does the beginning activity bear any relation to the period of lactation?

How is the activity controlled?

What relation, if any, does the thymus gland bear to the thyroid?

What is the physiology of the thymus gland? Why does it atrophy in early life? What is the influence and what relation do the other ductless glands of the body bear to the thyroid?

These questions have all occurred to me while studying this case, and if anyone can enlighten me, I should appreciate it very much.

The child under consideration still continues to improve in every respect.

[This is a most interesting case, beautifully managed. The important thing to do is to exercise a constant watch over the little patient for a number of years. According to Osler's "Practice," 7th edition, 1909, p. 771, the thyroid extract is the only curative remedy at our command. The fact that the child lost in weight under its administration need not have caused serious alarm. Prof. Osler says that one of his patients lost 30 pounds within six weeks. Dr. Sajous ("Internal Secretions," 2d edition, 1908) also advises thyroid extract, which may be stopped for a while in case untoward symptoms arise, careful control being imperative.

I think I should attempt to combine, or to alternate the drug with some form of iodine, perhaps giving both in alternate weeks. Keep the bowels open and the skin active. Be sure to tone up the general condition, and watch the temperature, which in these cases is almost always subnormal. Take great care that the little girl does not take cold, to which she is peculiarly liable. Calx iodata ought to be of twofold benefit,

giving the iodine in an easily assimilated form, and supplying the calcium in which the organism is deficient. The doctor should make it very clear to the parents that he must see his little patient frequently, at least once in a week, while taking the thyroid extract in full doses, less often while taking less or when under iodine. We have not the time or space to answer the many inter-

esting questions asked. Sajous gives the answers to several of them. The later textbooks on physiology also contain what is known about this difficult problem. We are interested in the case, and would ask the doctor to report again on it, say, in a year from now, or sooner if anything remarkable occurs regarding it, in the interval.—ED.]

Cutting Short an Attack of Pneumonia

A Method Which Is Effective During the First Twenty-four Hours

By M. J. HOPKINS, M. D., St. Louis, Missouri

I HAVE been impressed with the fact that statistics on the death-rate from pneumonia, for the past one hundred years, show little or no material improvement under the various systems which have been and are now generally employed.

After a careful study of the subject, eleven years ago, I recognized there was no known specific in the treatment of pneumonia, therefore I concluded that all my efforts henceforth should be directed toward aiding the natural forces of the system in resisting and expelling the cause of the disease, and as a result I have not lost a pneumonia patient if seen within twenty-four hours after the initial chill, and but one patient, who was an alcoholic, seen forty-eight hours after attack.

We can all realize, in a beginning case of fulminating sthenic pneumonia, that a rapid process of general congestion is taking place. Then, with such a picture before us, it is easy to understand that not only the lungs but all other organs and tissues of the body are being infiltrated by blood-cells, under the high pressure. We can also agree that when an organ is congested it is handicapped in performing its normal function, in proportion, at least, to the degree of congestion.

If this be true, it would seem a rational procedure to unload the burden from every organ of the body in the shortest possible time and with the least possible resistance

and irritation, and then to keep them free. I might say such a condition would demand it. The question then is, what shall we do, and how can it best be done? My method comprises the following:

1. Thorough examination of the patient, bare to the skin, to learn the condition of each organ. We are then ready to administer our alkaloidal remedies in the most effective way.

2. Complete unloading of the alimentary tract and keeping it free.

3. Mild and continued dilation of the capillaries, promoting the activity of the entire glandular system.

4. Support of the heart and the nervous system.

5. Remembering the great importance of making the blood-cells hungry and thirsty so that they will feed on and pick up the exudation from the broken and other cells which infiltrates the congested tissue.

6. To accomplish which, practically no food is given for three days, and as little water as possible, only just enough to keep lips, mouth and throat moist.

7. Careful nursing, keeping the patient from rising, and when food is started, giving baby-foods, gradually increasing the amount to suit the strength of the patient.

My method of cleaning the alimentary tract is to have the patient drink three or four glasses of plain water, while I load my hypodermic syringe with 1-10 of a grain of

apomorphine, and if the heart is weak, 1-100 grain of digitalin. This I inject, and in from fifteen to twenty minutes the stomach is well emptied. The effect of the apomorphine is wonderful, while its sedative effect of relieving the pain and irritability is most gratifying to the patient, to the friends and the doctor. The capillaries and glandular system are opened, and begin functioning throughout the entire system. The skin is bathed in perspiration, and all the glands function, as is seen by the increased action of the kidneys and the excessive secretion of the stomach and the salivary glands.

As soon as the patient's condition will permit, after thus emptying the stomach, an enema, composed of one heaping table-spoonful of table-salt and two quarts of warm water (100°F.) is given, and repeated until the water is returned clear.

The position of the patient in taking this enema is an important one, as the object is to clean out thoroughly the caput coli, because this portion of the alimentary tract, even in good health, is known to develop more bacteria than any other part of the body, and they increase proportionately as the vital forces are weakened. The patient lies on his back, the hips are raised at least eight inches above the shoulders (a hard pillow doubled or a quilt tightly rolled will answer), and the left hip is raised about four or five inches higher than the right, thus allowing water to gravitate to the cecum. Repeated enemas are necessary to cleanse the colon and to keep it clean.

The medicinal treatment begins with the administration of calomel, 1-10 grain; ipecac, 1-10 grain; sodium bicarbonate, 1-2 grain. These are given along with calx

iodata, 1-3 grain, one dose of each every fifteen minutes until eight are given. Then a full dose of saline laxative, after which I give two tablets of calx iodata every two hours, more or less frequently, according to conditions, with 1-3 of a calomel compound tablet and two grains of quinine while the patient is awake. I leave off the quinine altogether after well marked tinnitus appears. The saline laxative is used as required.

The defervescent compound No. 1 tablets, in solution, are used to control the pulse and dilate the capillaries according to indications. Hold the pulse down to from 90 to 100, and the temperature will take care of itself. For the heart and nerves digitalin and cactin are of use, and sometimes small doses of codeine or bryonin for pain in the chest. I give medicine only as conditions demand it, and use whatever alkaloid is best suited to control the condition.

In conclusion, I will say, I do not fear pneumonia when the alimentary tract has been thus cleansed and kept free.

The gist of the treatment thus is:

Control the pulse by defervescent compound No. 1. Blood-cells made hungry and thirsty by withholding food and limiting water until congestion has passed. Minute doses of calomel and calx iodata freely, with sulphocarbolates, which are intestinal antiseptics *par excellence*; they retard fermentation throughout the entire alimentary tract and stimulate the whole glandular system. Thus, with all avenues of the system opened and kept so, and the pulse controlled, pneumonia no longer can claim the fearful mortality of the past. I hope others will try this method.



An Emergency Tropical Pest-Hospital

A Personal Experience

By ROBERT GRAY, M. D., Pichucalco, Chiapas, Mexico

Sleep, Doctor, sleep though many regret thee,

Who stand round thy cold bier today;

Soon, soon the fondest shall forget thee,

And thy name from earth will pass away.

Yet there is one that still shall pay thee duty

Of tears for the true and the brave,

As when first in the bloom of her beauty

She wept o'er the Doctor's grave.

—*Old War Song.*

MOURNFUL requiem to a promising young English brother, new in this fearful field whose life was nobly sacrificed at the inception of an epidemic pestilence is responsible for the subject-matter that suggests the headline of this article.

American brethren cannot even begin to imagine an abandoned plantation house transformed into a pest-hospital in a day—cots constructed from forks and sticks; two-score yellow-fever and putrid-dysentery patients dumped on these rude beds; a league distant from any habitation; but one single medical man to administer to this miserable lot of moaning and groaning humanity; the end of a corn-crib, half full, and ten yards from the hospital, serving as abode and dispensary; ignorant and filthy peons acting as cooks and nurses.

Such was my unenviable predicament during all the month of September—a task an offer of ten thousand dollars would not have tempted me to undertake. But stern duty and humanity called, and it developed upon me to stamp out the epidemic that had started on the big plantation where the young doctor perished, the virulence being so intense that an alarming death-rate quickly resulted.

The Beginning of Treatment

My mere presence on the ground calmed the panic, and this was nearly half the battle. I began the treatment with a clyster of strongly impregnated solution of epsom salt and lemon juice. I also gave frequently tablespoonful doses of strong lemonade with the white of two eggs stirred in, to allay the

fearful vomiting, supplementing with half-grain doses of zinc sulphocarbolate. When the tendency to vomit was subjugated sufficiently to justify it, I gave a purge of castor oil, 4 parts; olive oil, 2 parts; lemon juice, 1 part, with salt sufficient to season strongly.

Clysters and purges were repeated as needed. Zinc sulphocarbolate and atropine sulphate, pushed to the limit of tolerance, acted in the cases of dysentery wonderfully past belief, while clysters of boric acid and tannic acid, given separately, rendered admirable assistance. Aconitine, veratrine, quinine and other febrifuges were extremely useful. All the strong lemonade the patients would drink was given them.

New patients who continued to come in from day to day for some time were speedily cured; those already nearly dead held out long and tenaciously.

The nourishment was white of eggs suspended in lemonade, olive oil, rice cooked to jelly consistency, and thin corn slapjacks toasted till nearly half carbonized.

While such treatment may not be justified by any recognized medical precept or rules of practice, a victorious outcome as in this case would not readily be attained under any of the recognized methods of medication as now practised by the profession, for be it known that there was but one death out of over one hundred patients treated.

The Sad Case of a Peon Girl

Amid the motly herd there languished a peon girl, of half-breed mother and a white father, tall, lithe and slender of form, with heavy long black hair and big dark eyes, set as they were in that pallid emaciated face when I first glanced over that blighted and wasting bud of womanhood. She had been dangerously ill with fever and dysentery eleven days, and was out of the rational realm of hope, even for my supersanguine faith in the possibilities of medical art.

However, I resolved to make the supreme effort of my life in coping with the destroying angel.

Not a drop of water would remain for even a moment on the rebellious stomach. Rectal medication and nourishment were impossible. The fever was seething the very marrow of her bones, while the little remaining blood was steadily oozing from her wasted body. I took out my ever reluctantly employed hypodermic mysteries; yet it were idle to recount in detail the manipulations of glonoin, cactin, aconitine, atropine, and other familiar powerful agents.

Eight days later there was no fever nor dysentery, but there lay before us the breathing skeleton of a young girl whom no device of human invention could nourish. A teaspoonful of lemonade once an hour was tolerated, yet given in greater quantity or oftener it would immediately be expelled, the rectum also rejecting any clyster as it was being applied, while spasms instantly supervened at the slightest attempt to force retention. The heart alone responded beautifully to tonic treatment, while other hypodermic applications produced harmful rather than propitious influence.

A Sad Ending

Six days and six nights the rythm of the heart was sustained, with a fairly normal pulse, under the purely artificial influence of glonoin, cactin and strychnine arsenate in alternation, till the closing hours of the final night, when glonoin alone sufficed, the others lacking the requisite power.

At three o'clock in the morning the girl asked, "Doctor, shall I ever see the blessed sun again?" and I replied, "Yes, little one, for the night is beautifully clear."

A gossamer film of mist mantled the earth and it became transfused with the radiance of rainbow tints when the round dazzling splendor of the sun of the torrid clime bodied forth above the brilliant horizon.

"*Que linda vista!*"—"What a lovely sight!"—the poor dying girl feebly exclaimed, not heeding me nor ought besides. Then those lips of ashen hue silently moved as if still speaking, while the fading eyes closed

as though in gentle sleep. The pulse held a weaker yet steady stroke and the respirations were regular with no semblance of agony nor other signs of the presence of Death; the extremities were not cold.

The sun gleamed in through open spaces between the reeds of the thatched wall, illuminating her neck, her arms, her chest, making the flesh appear almost transparent, thus demonstrating to the eye of the physician that the heart was pumping merely a watery substitute for the nectar of life, that was finishing the last drop of blood. Abruptly the heart ceased beating without the slightest token of warning that it would no longer render bootless labor, and the ever-faithful mother and I alone knew there was death in the house. Then men came to carry away the shrunken form to a coffinless grave. I would fain have bought for her a neat shroud and casket, but none such could be had nearer than sixty miles distant.

And thus a fair young life, still innocent and full of hope, found refuge where

Silence guards with solemn round
The bivouac of the dead

from a destiny of becoming at best the wife of a vicious semibarbarous peon or the neglected mistress of some loveless voluptuary.

A Lesson of Priceless Import

There remains from her a lesson to me of priceless import: knowledge of sustaining scientifically the heart for a long period even after there is no longer the natural life-force to retard dissolution. She was in the hospital fourteen days.

There was brought to us another young girl, a cousin of the first, who apparently was equally hopeless, and she lingered for twelve days before every vestige of disease was removed. But this patient never vomited after the third day, while clysters stayed by her for thirty minutes or longer without causing the least inconvenience. Still, she never displayed any disposition to rally, but rather declined to a semicomatose state of speechless unconsciousness such as I never had witnessed in a fated victim of disease before. However, when the fever recurred

no more and the hemorrhages were staunched. I noted a marked relish for chicken broth and lemonade, white of eggs and lemonades, and no repugnance for olive oil. And thus, aided by artificial cardiac support, she recuperated in ten days to a condition of auspicious convalescence that led to a rapid and uneventful recovery, such as would have been the case of the dead girl had there been any possibility of nourishing her body even to a fraction of that to which the heart's action was stimulated.

Some Helpful Remedies

Copper arsenite, a favorite and sure substance in the prevailing gastric fluxions and intestinal disorders, I employed twice. It was vomited in each case after the tenth fractional dose. Powdered ipecac, one of the best standard remedies in your *materia medica*, in fractional dosage for dysentery, was vomited at the second administration, while zinc sulphocarbolate was never once vomited, save by the girl who died, not being retained once by her. Atropine sulphate was never vomited, and it was the prime factor that staunched the hemorrhage in many seemingly hopeless cases, the zinc lending astringent aid of no mean degree and rendering vital antiseptic service. But lemons were helpful in an incalculable measure, both as an antiseptic and detergent element in clysters, and antiseptic and refreshing by mouth, the consuming thirst of these gastric and pernicious fevers being a fearful complication that nothing soothes so promptly and lastingly as lemonade.

In all my long and varied tropical experience I never before met so many cases of dysentery at one time complicated with the element of yellow-fever; and there was no case of fever without dysenteric indications. Almost every case began with fever, sometimes three days before dysentery appeared. As a matter of course I know nothing of those who died before I arrived, more than that they had virulent dysentery. After I was on the ground the new cases of yellow-

fever were of mild form, not necessarily fatal, only one case of black-vomit developing which recovered, but little medicine in addition to white of eggs and lemonade being employed to check the vomit. Aconitine and gelseminine were used successfully as febrifuges afterward.

Treatment in Advanced Cases

I had good result in old cases with intestinal ulceration developed to a dangerous degree, using clysters of emulsion of olive oil, lemon juice, oil of turpentine and yolk of eggs.

This is usually a wet country, rarely a fortnight passing without rain; but for four consecutive years there has been so very little rain (four months several times without a shower) that the streams and swamps dried up, this resulting in disease-epidemics previously seldom known here. Now it has been raining again almost daily for more than a month, which has terminated at last in dysentery and pernicious fever, and this has left an epidemic of influenza and what follows in their wake, so that the poor people and overtasked doctors still have a tedious time of it.

Mexican Investments

It is a pity and a shame that disease and pestiferous insects are so distressingly prevalent in this earthly paradise, so that the hundreds of doctors who have written me about investments might buy cheap land, the richest and most productive anywhere, that will some time have ten or twenty times its present value. Still my advice would be not to buy nor to dream of living here.

Buy no stock in anything down here, where there are enterprises whose stock pays the highest dividends paid anywhere, not a share of which is for sale. Stock offered in the United States will never pay anything, and all money thus invested will be lost.

Let the above be my final answer, as I shall reply to no more subjects referring to such subjects.

Conditions in a Mexican Hospital

A Fight with Dirt and Ignorance

By GEORGE B LAKE, M. D., Wolcottville, Indiana

Formerly Assistant Surgeon, Mexican Central Railroad

THE purpose of the present article is to give to the reader some idea of the conditions under which a medical man labors in our sister republic to the south.

Before going to Mexico I had, in common, I think, with most people who have never been there, the idea that while the people spoke a different language and were dark-skinned the customs and institutions were about the same as those we are accustomed to. For this reason it was a surprise to me on crossing the dry channel of the Rio Grande to find that I had not only entered another country but also another century.

I will not here attempt to detail in how many respects Mexican peons are two or three hundred years behind us in industrial progress. Suffice it to say that illiteracy is the rule rather than the exception, that marital ties do not bind very firmly, and that dirt is omnipresent.

A friend of mine once said that his first impression on visiting a certain foreign country was the cleanliness of the cities, in such marked contrast with those of this country; and he wondered what they did with all the filth which, with us, accumulates in the gutter. He said that after being present in a closed hall where a large number of people were assembled this question was answered—they carried it around on their persons.

Mexican peons do worse than that. They carry around all the filth that can possibly adhere to their skins and clothes, and still leave plenty in the streets. They all bathe and put on clean clothes on St. John the Baptist's day each year, and many do not bathe at any other time. These prefatory remarks are necessary to an understanding of what is to follow.

The patient was serving a life-sentence for murder in one of the Mexican prisons, a foul hole reeking with filth and vermin.

The floor was his bed, his table, his chair. His food was of such a character as to shock the sensibilities of an American. In this condition he lay sick for two weeks upon the floor, eating the same food as the other prisoners, when he could eat at all. His family then asked me to call upon him, and I found the following conditions:

The man was much emaciated, his complexion was sallow and muddy, tongue heavily furred, temperature 103.5°F., pulse 120. In the left hypochondrium there was a tumor as large as one-half of an infant's head; this tumor was hot and red and it fluctuated. I diagnosed subphrenic abscess and advised immediate operation. Feeling certain that an operation in the prison would be sure to result fatally, I went to the proper authorities for permission to remove the patient to the city hospital, which was granted.

The hospital to which I removed him was the only one in the city and was a very picturesque structure, built about the four sides of a court filled with date, banana, orange and lemon trees and all manner of tropical flora. This garden was divided by a wall, on one side of which were the rooms for the men and on the other those for the women. The long side of the men's court was occupied by the ward, the two short sides (up to the wall) by private rooms.

The floors of all the rooms were paved with rather soft red brick, the walls were of *adobe*, or mud bricks, plastered over, while the ceilings were formed by the under side of the roof, which consisted of poles thatched with rough boards, brush and plaster. The beds were of iron, but in place of springs they were decked over with boards. Some had mattresses and some had none, the latter being preferable, as the mattresses were swarming with vermin. There was *not* a *sterilizer* in the building.

The manager of the hospital was the same individual acting as the prison physician, and being incensed at my taking the case out of his hands, he would give me no assistance; nor do I believe he would have permitted me to come into the hospital at all had I not held an official permit. For assistants, then, I had to rely on the two Mexican male nurses. These I coached thoroughly that evening in their duties of the morrow. One of them was a fairly competent anesthetist, which fact relieved me of much anxiety.

The family was too poor to pay for a private room, but I insisted on having the use of one in which to do the operation, and that night I had the nurses scrub it all over thoroughly; they were also ordered to take a bath and put on clean clothes. I took my own sterilizer to the hospital, and also a large piece of oilcloth to put over the wooden operating table. The patient was bathed and had his bowels thoroughly evacuated during the night. The bed on which he was to lie had been thoroughly scrubbed with 1:1000 bichloride solution. The family furnished several freshly washed quilts to serve as a mattress; also freshly washed and ironed bedclothes.

We put the man on the table about 10 in the morning and induced anesthesia with chloroform. I opened the abscess by an incision about four inches long, parallel with and about an inch below the costal margin, nearly two quarts of pus being evacuated. I washed out the cavity thoroughly, put in drainage, closed the wound, and covered it with sterilized dressings. The man recovered well from the chloroform and said he felt much better. I gave the nurse and the man's family strict orders that his diet should be liquid until further orders, and that he was to keep *perfectly quiet*.

The Peculiar "After-Care"

On the *third day* after the operation, at about noon, I went in to see the patient and found him squatting on his haunches in the middle of the bed, eating *tortillas* and beef stew; and he then told me, when I questioned him, that instead of using a bed-

pan, which I had provided for the purpose, he had been getting up on a vessel from the first. This explained what I had not been able to understand before, viz., why the wound was not looking as well as it should. I repeated my orders as to his care.

On the fifth day I was called a long way out of town, and I carefully instructed the nurse how the wound should be dressed.

On examining the wound next day I found that instead of using the sterilized dressings which I had provided, the nurse had used the unsterilized dressings furnished by the hospital.

As a result the wound looked red and angry and pus was oozing from stitchholes.

In spite of all I could do in the way of antiseptic irrigating, etc., gangrene appeared at the edges of the wound the next day, spread rapidly and on the fourth day following the patient died, eleven days after the operation.

I have recited this case, not to present a surgical curiosity, but as a typical example of the state of surgical knowledge and practice in the towns and smaller cities of the Republic of Mexico at the present time. This was not an exception but the usual rule. Surgical patients are given *tortillas* [corn-meal fritters], *frijoles* [beans], stewed meat, and in fact anything which the other patients get as soon as they recover from the anesthetic enough to eat at all.

An American physician who had been in Mexico for a number of years told me, seriously, that it was impossible to operate *in that altitude* without having pus. This shows that even foreigners become infected with the lax and careless spirit which prevails in that country.

The family of the patient mentioned in this article did not seem to think it strange that the things I have spoken of were done, and when the man died they simply said, "*Muy bien*, it is the will of God."

The fact of the matter is that we do not appreciate the blessings of civilization until we have lived for some time in a semi-civilized country; and of all who profit by the enlightenment of their fellow men the physician is one of the foremost.

Specific Treatment in Gastric Diseases

Valuable Helps for the Treatment of Stomach Diseases

By A. L. BENEDICT, A. M., M. D., Buffalo, New York

THE writer has elsewhere (*Therapeutic Gazette*) made a plea for the return to the old conception of specific medication, with due allowance for inevitable failure, and pointed out the need of attending to general conditions as well as special symptoms, and the fact that we cannot have specific therapeutics in the sense of one drug for one disease-name until our nomenclature is revised so as to represent definite nosologic units.

With these qualifications, specific medication is by no means a superstition of the past nor an aspiration of the future, but, to some degree, an accomplished fact. For example, we may mention quinine for malaria, mercury for syphilis, diphtheria antitoxin for diphtheria, vaccination as a specific prophylactic of variola, etc., and may reasonably expect further additions to our armamentarium both along the lines of biologic products and of drugs, vibratory forces, and other agencies.

No Specific Treatment for Disease-Names

It is obvious that as long as we speak of a patient as having dyspepsia, constipation, diarrhea, and so on, or of being "liver-grown," there can be no realization of the idea of specific treatment, nor, indeed, of any treatment whatever that is of use except by a lucky chance. Neither does employment of more technical terms aid us, unless they are used accurately. Whether the term "specific" medication or therapeutics is considered allowable or not, we shall accomplish nothing of definite value to the patient till we realize that diagnosis does not mean giving a name to a condition merely to placate the patient or improve the appearance of our records, but that diagnosis is, in the most literal sense of the Greek word, a *thorough knowing*.

Another important point is to realize the paradox that, on the whole, the functional

condition is not only not more amenable to treatment than the organic state, but really more serious. As to the latter paradox, we need only allude to the heart as an illustration. The worst possible heart, from the standpoint of the museum, with leaky and obstructed valves, degenerated myocardium, calcified coronary arteries and adherent pericardium, enlarged and dilated but still beating, is a good deal better than a heart without any discoverable lesion that stops from an emotional cause or a physical strain.

No Such Thing As a Functional-Condition

Again, we are getting around to the belief that there is no such thing as a functional condition, aside from a temporary disturbance of innervation, but that there is always some lesion, and very often one perfectly demonstrable with present histologic methods. Thus when we speak of functional disorders, it is with the proviso that the organic condition is undiscoverable simply because we can not expect to be able to inspect the organ and that we are laying stress on what the organ does or fails to do rather than on what it might look like.

If we use the term neurosis as a substitute for functional condition, we must eliminate the thought of a neurotic state of mind. Of course, a neurotic individual may have some form of dyspepsia and, if so, the latter is likely to produce more symptomatic disturbance than when it occurs in a person of normal mentality, and we may even concede that the condition itself is worse; but, generally speaking, a gastric neurosis has no connection with a neurotic state of mind. The term nervous dyspepsia is also liable to place the practitioner on the wrong track, or, rather, the fact that he uses such a vague diagnostic term shows that he is already on the wrong track.

The writer has, at present, a patient said to suffer from nervous dyspepsia. Physical

and chemical investigation show that the man has no digestive disturbance at all. Another such patient committed suicide within a few days after examination of the abdomen and of the stomach-contents showed that there was no gastric disturbance. To put the matter plainly, there is a distinct type of so-called nervous dyspeptics who are not dyspeptic at all. Some of them have other troubles, for example movable kidney, chronic colitis, etc., while others are purely nervous, that is to say, hysterical. On the other hand, we find many persons with a true dyspepsia of one kind or another and who are nervous simply because their business is interfered with or because they are apprehensive of the future, or, still more directly, on account of autointoxication.

Different Kinds of Dyspepsia

There is a very pretty classification of dyspepsia into motor, secretory and sensory disturbances, each subdivided into exaltations, depressions and perversions of the normal function. For practical purposes, it is well to eliminate sensory conditions, although there may be neuralgia or even neuritis of the gastric nerves. Nine times out of ten, however, a gastralgia is due to chemic irritation or to motor disturbance, or marks some organic condition, such as ulcer; in other words, the pain is not due to an abnormal sensory function. On the contrary, there would be something the matter with the gastric nerves if pain were not felt.

Again, it must be remembered that a so-called gastralgia or heartburn, may be due to a cause extrinsic to the stomach, as a gallstone, adhesion, inflamed appendix, pancreatic lesion, etc. Many of the most typical cases of "hyperchlorhydria," judging from the symptoms, are really cases of gallstones. Sometimes, with gallstones, there is actually a reflex hyperchlorhydria, but the cases with depressed secretory function appear just the same.

Right here we have a very good illustration of practically specific symptomatic medication. While all sorts of anodynes may be employed, gastric pain due solely to super-

acidity requires nothing more than alkaline treatment, preferably by a fixed alkali such as magnesium oxide or hydroxide, and, in hyperchlorhydria, in which the acid products are practically lacking in toxic properties, dilution by taking a drink of cold water may not only ease the discomfort but temporarily check further secretion.

The Treatment of Gastric Pain

Gastralgia due to lesions of the stomach itself, mainly some form of ulcer, is usually checked by mild local anesthetics, such as orthoform and anæsthesin. Cocaine is not often necessary; indeed, Meltzer has shown it to have some general action. Speaking from personal observation alone, the writer would be inclined to say that orthoform and anæsthesin would also relieve gastralgia due to hyperacidity and without lesion of the gastric wall, but some hold that these agents do not act unless the mucosa is more or less denuded. Obviously, it is exceedingly difficult to draw the line between simple hyperchlorhydria and certain types of ulcer with hyperchlorhydria or even normal or moderately deficient acidity (even small amounts of acid producing pain if the mucosa is defective) and hence it is correspondingly difficult to be certain as to the limitation of action of these drugs.

Bearing in mind the fairly definite therapeutic indications, they may, to a certain extent, be worked backward as a means of diagnosis. For instance, a gastric pain, not relieved by alkalis and the mild local anesthetics mentioned, not accompanied by shifting neuralgic pains in other parts, is pretty certainly due to some trouble within the abdomen and outside the stomach—often to gallstones or cholecystitis without calculi.

Some Secretory Abnormalities

Turning to secretory abnormalities, the subject of excess of secretion has already been introduced. For practical purposes there is no such thing as an excess of ferments and, indeed, no present possibility of demonstrating it. Under the abominable term of "gastrosuccorhea" there has been described an excess of secretion as a whole,

not necessarily, though perhaps usually, including an excess of hydrochloric acid. This condition is now, however, almost universally regarded as symptomatic of ulcer. Hence an excess of secretion of the stomach really means hyperchlorhydria.

Few diseases are so definite in their indications and so positively controllable as this succorhea. *But*, as the condition is probably not a neurosis at all but due to hyperplasia of the oxyntic cells, it is extremely prone to recur, and we can not promise a cure except in the sense that any such lesion—that of exophthalmic goiter for instance—tends gradually to wear itself out and to be followed by an atrophy. Still, it is possible that many cases are neuroses. At any rate, a surprising number, after brief treatment, remain subjectively well with reasonable care as to diet and do not even seem to develop the expected reactionary hypochlorhydria. Alkalis, especially magnesium oxide or hydroxide and calcium hydroxide, are specific in this condition so far as the state of the stomach contents is concerned, and we may even, by titration and estimation of the bulk of the latter, measure the dose of alkali with approximate accuracy.

In a negative sense, we have a more radical specific treatment. Obviously the diet should be free from stimulant ingesta and should include considerable carbohydrates and fat because these substances do not require and therefore discourage the secretion of hydrochloric acid. This principle is generally credited to Pawlow, and justly, so far as scientific demonstration is concerned, but it was clearly appreciated on theoretic grounds and supported by clinical experience, at least ten years before Pawlow was known.

But there is a more definite specific, though negative, treatment which the writer would urge for more general practical acceptance. We may doubt the statement that bricks cannot be made without straw but they certainly cannot be made without clay. Now, however numerous or active the oxyntic cells may be, they cannot secrete hydrochloric acid unless chlorine is available, and if we starve the body so far as

chlorides are concerned, hyperchlorhydria becomes impossible. Practically, it is usually necessary only to insist that salt as such shall not be used in the kitchen or dining room to season the patient's food.

Hyperchlorhydria—Excessive Hydrochloric Acid

While undoubtedly many persons have a secretion of hydrochloric acid beyond the normal average for human beings, approaching or exceeding that of the dog, without especial symptoms, strictly pathologic cases of hyperchlorhydria are very seldom construed otherwise by a reasonably careful observer, depending on the history and symptoms.

But, there is an entirely false general opinion as to the frequency of hyperchlorhydria. Without in any sense being rare, it is much less frequent than the opposite condition in any average series of gastric cases. Cholecystitis, with or without calculi, chronic appendix inflammations, neuralgia, and ordinary sour stomach due to deficient hydrochloric acid with resulting organic sourness, are very often misinterpreted as hyperchlorhydria. Even when the stomach-contents are analyzed many men form a mistaken view of the nature of the case, first by placing the limit of normal gastric hydrochloric acidity too low, secondly by reading their end-point at the complete decoloration of dimethylamidoazobenzol, instead of at the change from cherry to orange, which occurs 10 to 15 degrees lower. Normal gastric juice has an acidity of about 50 degrees. It forms about half of the stomach-contents, so that the normal hydrochloric acidity after a test-meal is about 25, though it may be as low as 15 degrees without justifying the diagnosis of hyperchlorhydria. Now, a man regularly exaggerating his reading by 10 to 15 degrees will interpret practically every case of normal secretion as a marked hyperchlorhydria. This has its advantages: he will be able to report a large number of unusual cases; his patients will require longer treatment and will furnish interesting paradoxical combinations of hyperchlorhydria with fermentation, as against

the man who makes his diagnoses correctly and promptly relieves the symptoms.

Unless there is isochymia, or unless food already in a state of fermentation is swallowed, or unless the hyperchlorhydria is recent or occasional, it can not be associated with any great amount of fermentation and gas production. However, the patient will usually complain of gas, because there is always some air swallowed and a little gas formed in the stomach and the irritation of the hydrochloric acid will give the impression that there is a great deal of gas. . .

The Treatment of Scanty Acid Secretion

The treatment of hypo- or achlorhydria is specific in the direct sense, consisting in the administration of hydrochloric acid at intervals after meals, in doses corresponding to the deficit and the bulk of stomach contents, as well as the capacity for different foods to combine with the acid. The detailed consideration would occupy too much space. It should be remembered, however, that the lack of hydrochloric acid is sometimes conservative, as in gastritis and perhaps in cancer and old age; also, on the other hand, that the administration of hydrochloric acid does not of itself produce a permanent cure and that many cases, owing to atrophy of the tubules or some underlying depressing cause, as tuberculosis, can never recuperate the acid-producing power.

Care in diet, the use of sapid but easily digested foods, and strychnine comprise the simpler means of stimulating secretory function. An abundance of salt may be considered specific, but excessive amounts diminish gastric acidity immediately, either by producing osmosis to cause dilution of the chyme or by inhibiting the oxyntic cells directly, or by both means. Furthermore, while the stomach cannot form hydrochloric acid without chlorides, it is by no means certain that it can do so with them.

When the Ferments Are Deficient

Ferment failure is frequently noted in achlorhydric cases, rarely to an appreciable degree if any free hydrochloric acid is found, and never, so far as the writer knows, if

hydrochloric acid is normal or excessive. For practical purposes, pepsin and rennin may be considered as one ferment acting in different ways, even if this is not literally the case. Occasionally, gastric juice or filtrate after a test-meal will dissolve albumin and not coagulate milk, or *vice versa*. Such cases are so rare, however, that it is a question whether there has not been some fault in the technic. At any rate, the ferments have not been isolated in a pure state and commercial pepsin will coagulate milk, while that sold for rennin will dissolve albumin.

When gastric juice, even after adding hydrochloric acid to the normal strength of about 25 to 30 degrees, does not dissolve albumin after several hours, we may be certain that pepsin is not present, even in the stage of a proenzyme, to an appreciable amount. In such cases, if the stomach is washed with hydrochloric acid, it will sometimes yield pepsin; if not, we may conclude that there is a failure of ferment formation as well as that of hydrochloric acid. Here we might apparently conclude that pepsin would be a specific. Unfortunately, the stomach that can not secrete ferments is usually in too bad a state to perform its function properly even if they are supplied.

If in these cases a digestive ferment is used at all, it is usually better to employ papain or one of its vegetable congeners, or to administer predigested food. At any rate, it should be borne in mind that tons of pepsin are used where only grains are needed; that cases with genuine lack of pepsin are encountered once a month or once or twice a year in large practices limited to the digestive organs, instead of daily or weekly in general practice, and that, nine times out of ten, pepsin-prescriptions are not only not specific but absolutely irrational.

With reference to motor disturbances, it is impossible to speak of specific treatment, except that strychnine is fairly reliable to stimulate motor power and, indeed, may well supplant all of the ordinary bitters. However, motor and secretory function usually rise or fall together. It should be remembered that rapid emptying of the stomach

often occurs in cases in which the motor as well as the secretory power is weak and that retention of food is usually due rather to pyloric obstruction or ptosis than to motor

weakness, and that in retentive cases there is often supermotility though still not sufficient force to overcome the mechanic obstacle, at or just beyond the pylorus.

Proctitis and Periproctitis: A Study of Their Relations to Common Rectal Diseases*

*With the Description of a New and Successful
Method of Treatment*

By J. D. ALBRIGHT, M. D., Philadelphia, Pennsylvania

FROM among the several subjects which suggested themselves to me when I received the invitation [to appear before this body today I have selected one which has impressed me as being the most interesting, the most important, and in many respects the most intricate pathologic process found in the anorectal region. Interesting, because a careful study of inflammatory action in and about the rectum can not fail to fascinate the earnest student; important, because of its relation to many supposed diseases of the region and its effect on the person attacked by it; intricate, because no one has ever dared to estimate the extent of its action, nor measure the realm throughout which its influence is exerted.

Proctitis, which in all chronic cases includes periproctitis, deserves first place among anorectal diseases, not only because of its prevalence and serious nature, but because it is directly responsible for the production of many abnormal conditions which have for ages been looked upon as distinct diseases. This is a statement that anyone, even though but slightly conversant with proctologic literature, will recognize as being exactly contrary to the views of practically all writers on the subject, yet I predict that before we finish the discussion which will follow the reading of this paper, the truth of it will have been demonstrated.

In regard to the cause of proctitis some confusion exists. This is due to the adoption

of the term "proctitis" for the chronic condition as well as for the acute condition, for strange as it may seem, acute and chronic proctitis are not related to each other. Theoretically, all subacute or chronic conditions must have had an acute stage, and this is doubtless as true as that the adult must have been a child, but the point to remember is that the disease commonly known as acute proctitis, that condition of rectal inflammation which is usually due to external causes is not the precursor of what we term chronic proctitis, the proctitis which belongs to proctology. Acute proctitis belongs to general medicine.

The First Stage

The first stage of chronic proctitis is never well marked, for although hundreds of patients who presented well-marked evidences of chronic inflammatory action in and about the rectum have been carefully questioned, scarcely any have given any history of marked acute rectal inflammation, yet we all know that the victim of a well-marked attack of this painful affection is not very likely to forget it. When, occasionally, one is consulted in regard to what at first seems to be acute proctitis, a careful examination of the entire rectal mucous surface should be made, and if this is done, tissue changes and deviations from the normal will be noted which must of necessity have taken years to produce. This indicates that what might be considered acute proctitis is in fact an acute manifestation of chronic proct-

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titis, brought about by local disturbances of various sorts. If, for example, the term "rectitis" were adopted as descriptive of the condition under consideration, less confusion would result. One might then say that chronic rectitis is preceded by acute rectitis, but not that chronic rectitis is preceded by acute proctitis. The diseases are not identical, although similar to each other, and it is unfortunate that there is not a distinctive term given to each. This will doubtless come later on, for until recently the essential differences between them have not been recognized, although one of the accepted authorities seems to incline toward treating acute and chronic proctitis as two separate diseases, in his recent writings.

With the causes of acute proctitis we are today not concerned, for it is to the chronic condition that your attention is to be directed.

Etiology of Chronic Proctitis

Reflecting upon the prevalence of chronic proctitis, or proctitis, as I shall hereafter term it, it becomes evident that its cause must be looked for among customs or conditions which are practically universal, yet I am not prepared to give any absolute information in this respect. It has been held that it is due to infection during infancy, when wet or soiled diapers are not as promptly removed as they should be, which theory is strengthened by the fact that proctitis is not infrequently found in comparatively young children. This is further supported by the theory of official surgeons, who claim that "irritation of an organ begins at its mouth." Other causes may be the use of improper food, digestive disorders, the use of purgatives or other means for the relief of constipation, or any other influence which causes irritation or injury to the rectal mucous membrane. We do not, however, wish to speculate upon theories at this time, for we are confronted by a condition that is real; not a theory that may or may not be correct.

Nature, apparently anticipating the abuse to which the rectum would be subjected, wisely supplied it but scantily with sensory nerves and not overabundantly with blood-

vessels, except at its lower extremity, where injury is more liable to occur, and rapid repair essential to the comfort of the individual. One can not imagine the misery which would be caused were the rectum as liberally endowed with nerves of sensation as certain other portions of our bodies are. Because of this, considerable variation from normal conditions may exist here without much discomfort.

The structure of the rectum and surrounding parts is not such as to offer much resistance to the insidious progress of inflammation, and as a result, it gradually extends its area without any notable evidence of its presence, and lays the foundation for a horde of symptoms that will later appear and demand attention.

Proctitis, in this developing stage, may be present for a long time before its victim becomes aware of its presence, although the occasional recurrences of some acute or sub-acute manifestation serve as a reminder that all is not well. In the young, when poorly nourished, anemic and slow of development, the progress of the disease is more rapid, and I have seen, in a child of seven, tissue changes which appeared similar to those seen in adults in whom it has been developing for twenty years. In these cases the lack of vigor and development is without doubt due to the rectal condition.

The progress of inflammation in and about the rectum is similar to that anywhere: irritation, congestion, engorgement, stagnation, death and decay of tissue. If reparative forces are active, there is at the same time fibrous-tissue formation going on, with thickening of the mucous membrane, lessening the caliber of the bowel, functional impairment because of circulatory interference, constipation, more irritation and congestion, and so on *ad infinitum*.

The First Symptom—Excessive Moisture

Mucous membrane secretes mucus when normal; more when irritated, hence the first symptom of proctitis is an abnormally moist rectum. Unfortunately, this stage has usually passed before we are consulted by those in whom it occurs. Were the inflammation

confined to the mucous surface, there would be comparatively little difficulty experienced in applying the proper remedies, but such is not the case. In its progress it involves not only the areolar coat and muscular investment of the rectum, but it passes through them into the perirectal tissues, and from them, as well as from the mucous membrane, the exudate continues. Coming from the deeper structures this exudate assumes a mucoserous character, and instead of being found in the rectum, it invades the cellular spaces surrounding it and the tissues about the anus.

The inflammatory products exuding from the mucous membrane, or at least those from the epithelial surface, accumulate within the rectum and are carried out during the act of defecation, but those coming from the deeper structures are not thus removed from the system. These also accumulate wherever an unoccupied space may be found, and from thence travel in the direction of least resistance, forming in some instances sacs or pouches, and in others they burrow in one or more directions, bringing about the formation of channels, or sinuses, of various lengths.

An exudate which arises within the mucous membrane, that is, within the epithelium or corium, or between these layers, is imprisoned for a time, but as the quantity increases the part becomes puffy and soon forms a sac or pouch, which is readily recognized during examination by means of a speculum. When of slightly deeper origin, or when thickening or toughening of the mucous membrane has taken place, furnishing too much resistance to the exudate, so that sacs are not formed, it will burrow in the direction of least resistance and form the channels already referred to. The most common course, under these circumstances, is toward the connective tissue between the mucous and muscular coats of the rectum, thence downward toward the anus.

How Mucus-Reservoirs Are Formed

As this stream of mucus or seromucus reaches the region of the anal opening cer-

tain obstructions will be encountered. The parts here are more firm and the frequent contractions of the sphincter-muscle interfere to some extent with its onward course. This impediment, however, does not permanently restrain its progress, but, changing its course, it burrows downward and under the skin about the anus, buttocks, perineum, scrotum, vulva, or into the space between the anus and coccyx.

The space between the rectum and coccyx is a favorite spot for the establishment of mucus-reservoirs, as the tissues therein are peculiarly adapted for its invasion. It is not unusual to find a channel running from some point near the anus, either in front or behind the rectum, directly upward for a distance of five to seven inches, nor to find them under the skin, running directly backward over the coccyx for seven to ten inches, forward along the perineal raphé, around the scrotum or labia, or down the internal aspect of the thigh.

The pouches or sacs which form in the interior of the bowel are most numerous in that portion known as the pile-bearing area, and their presence here is explained by the interference of the sphincters, chiefly the external, in constricting the canal. It is this sacculated condition of these parts that makes hemorrhoids possible.

The effect of the exudate that invades the perianal and subtegumentary areas already referred to is to render the tegument about the anus puffy and hypertrophied, giving evidence of more or less distention. The skin itself may become invaded, and this usually occurs in well-advanced cases. There is then a slow but persistent oozing of the exudate through the skin to the surface, producing the annoying moisture of the parts which by some writers is said to be perspiration.

Primary Symptoms Overlooked

With the primary symptoms of proctitis the proctologist has little to do. The disease may, and usually does, exist for years before a burning sensation will attract attention, and it is usually not until the secondary symptoms are developed that the specialist

is consulted. It is right here that the wide-awake general practitioner can step in and cure the patient, earning for himself a good fee and the gratitude of his patron.

During the developing stage of proctitis functional and structural impairment is going on continually. Nerve irritation and spasmodic contraction of the muscles gradually cause constriction of the rectum and anus, lessening their calibers and contributing to blood stagnation, dilation, thinning and weakening of the walls of the blood-vessels, pouched mucous membrane, and, in addition, a constant cell proliferation, which results in the inevitable formation of adventitious tissue.

About the anus and buttocks patients will discover hot or sore spots, indicating the location of channels or small reservoirs near the surface, which serve as guides for beginning treatment.

On inspection, in the early stages, the mucous membrane appears bright-red, but later becomes pale and flabby or edematous. If atrophic changes have taken place, there is that peculiar glistening appearance characteristic of the condition, and instead of being moist, as usual, it is dry to the touch. Except in the latter stages, after the inflammation has become localized in the perirectal tissues, or in atrophy, more or less mucus is always found in the rectum. The anal orifice is likely to be contracted, the sphincter-muscle irritable and tight. Constipation is the rule, with an occasional attack of diarrhea in some cases. During acute exacerbations the usual symptoms of inflammation are observed: pain, heat, swelling, desire for stool, tenesmus, and perhaps frequent desire for urination.

Secondary Symptoms

The three principal secondary symptoms of proctitis are pruritus ani, hemorrhoids, and anal fissure. Others might be mentioned as being due to the same cause in a large percentage of cases, such as certain types of fistula, ulceration, etc., but we shall not have time to consider them all.

In thus bodily lifting pruritus ani, hemorrhoids and fissure from the kingdom of dis-

eases to the province of symptoms, I realize that history and tradition are violated and the banner of orthodoxy trailed in the dust, but if by so doing I am crushing truth to earth, those who will not agree with me may console themselves that it will rise again. However, when one can match reason against results and find the former upheld and supported by the latter, an argument is advanced that admits of no rebuttal.

Inasmuch as proctitis has never received the attention its importance deserves, it is not strange that the etiology of these prevalent conditions has escaped the notice of those to whom we have been taught to look for light and advancement, and I beg of you to study this disease carefully and without prejudice. Truth is said to be stranger than fiction, and after you have mastered the intricacies it presents you will admit that the truth as you shall then see it will indeed be stranger than the fiction we have always been taught to believe in regard to these interesting conditions.

The Treatment of Proctitis

The successful treatment of proctitis is not difficult, but it requires perseverance and cooperation between physician and patient. It may be divided into home and office treatment.

The home treatment consists in rectal irrigation and the irrigation of the channels and the cleansing of the wound made during the office treatment.

By rectal irrigation I do not mean taking an enema or flushing the colon, but a process of applying hot water or medicated solutions to the interior of the rectum. For this purpose a special hard-rubber irrigator, having an outlet four times as large as the inlet, is required, thereby facilitating the escape of the hot solution with a gush, instead of trickling out through a small tube. The instrument is introduced into the bowel at the beginning of the treatment and is to be left there until the end, as, if removed while the hot solution is in the rectum, its escape would be liable to cause pain, for it must be remembered that the interior of the rectum will bear water much hotter than can be

endured on the external parts. After final irrigation the instrument is slowly withdrawn, after the rectum has been emptied.

For irrigation one may use hot water of 110 to 120 degrees, or one- or two-percent solutions of borax, sodium salicylate, potassium chlorate, magnesium sulphate or boric acid. If there is ulceration, antiseptics may be added, such as phenol, ichthyol, or hydrastis. Certain oils, as of cedar, cajuput or spruce, may also be used, mixing them with the water or solution by means of the addition of magnesium carbonate. While they will not really mix with the water, these oils will be so well subdivided that they will find their way into the rectum and act as stimulants, deodorants and antiseptics.

The inlet-tube of the irrigator is attached to the tubing of an ordinary fountain-syringe, supplied with a clip for controlling the flow, and to the outlet a short piece of tubing is attached, also provided with a clip.

How to Irrigate the Rectum

The irrigating solution having been placed into the bag of the syringe, the patient should be seated upon a commode or toilet and the irrigator introduced after proper lubrication. With the outlet tube open, the supply tube is opened, and as soon as the solution begins to flow out of the outlet tube the latter is closed. When a moderate distention of the rectum has been effected, as indicated by the desire to evacuate its contents, the inlet tube is also closed and the solution retained for five or eight minutes, after which the outlet is opened and the solution allowed to escape. This process is repeated as soon as the rectum is empty, and continued for at least half an hour, longer if time permits. As the water in the reservoir cools, more hot water must be added; or, if an alkaline or antiseptic solution is used, it can be kept hot and added as needed. This process is to be gone through at least once daily, morning and evening if possible. Only a moderate distention is required, six or eight ounces being quite sufficient, as further pressure would send the liquid into the sigmoid and disturb its contents. When properly done thorough rectal irrigation can be accom-

plished without material discharge of fecal matter.

Hot water or hot medicated solutions are essential to the successful treatment of this condition, the heat being probably of more value than the medication. Nothing excels hot water for rectal pain, either by irrigation or applied externally by means of the sitz-bath.

While this is being attended to by the patient at home, the office treatment is given by the physician, and this brings us to the most interesting as well as the most important portion of our battle with this, in many respects, remarkable disease.

The Burrowing Sinuses

In order to cure the disease and obliterate its symptoms so that they will not recur, the sinuses or channels formed by the burrowing of the imprisoned exudate must be opened, evacuated, irrigated and obliterated.

Before going further it will probably be best to state that apart from the small percentage of cases of pruritus ani which are caused by parasites, worms or eczema, all of them are due to the existence of subtegumentary sinuses throughout and sometimes beyond the itching area, and it is for the relief of this symptom that you will be most frequently consulted, when proctitis and periproctitis exist. Other symptoms, although annoying and at times painful, are practically ignored when pruritus begins an active campaign. Thus it becomes evident that the proper treatment of pruritus ani is practically the treatment for proctitis, or more correctly, periproctitis, and while some cases of the latter do not develop well-marked itching, all cases of true pruritus ani coexist with channel formation. The itching caused by other causes is not true pruritus ani, and need not be mentioned further.

The office treatment of periproctitis is operative, but can and should be done under local or regional anesthesia; in fact, it is due to the great advances made in the development of a suitable technic for the induction of local anesthesia, that this method of treating the condition under consideration has been made possible.

The patient is placed on either side and the external parts are carefully examined for abnormal discoloration of the skin, points of tenderness and hot or sore spots. The latter can be pointed out by the patient, as well as to indicate the points at which itching is most severe. This is done in order to gain some idea as to the direction of the channels for further exploration.

As there is usually more severe itching near the anus than elsewhere, the tissues immediately back and in front of the anus are liable to be most extensively involved in the pathologic process, and it is here that the initial incision is usually made. The rule is to begin operations as near to the source of the exudate as possible.

The Operative Technic

Having decided to begin posteriorly to the anus, the parts are anesthetized and an incision about one inch in length is made, cutting straight inward until a depth of an inch to an inch and a half is reached, enlarging the opening forward and backward so that the interior corresponds with the external incision. This done, a fine silver sound is taken and the parts are thoroughly explored. The tissues immediately posterior to the rectum will usually be found so badly damaged that the probe can be passed upward for four to six or more inches, and at times swept from side to side for a distance of two inches on each side of the median line.

Turning the sound backward toward the coccyx, either immediately under the skin or deeper, a channel will often be found extending over the coccyx some six, seven or more inches from the point of incision. Others may be found coursing along the buttocks, or forward from the point of incision around the anus to the scrotum or elsewhere. No portion of this area is exempt from these burrowings. From the main sinuses branches are liable to be given off, just as in the ordinary form of fistula, for these channels are in fact fistulas, but differ from the usual variety in that they are without pus.

After a thorough exploration the wound is cleansed and the channels irrigated by

means of a small silver cannula attached to a large aspirating syringe, or a small hard-rubber tube may be attached to a fountain syringe. For irrigating the wound and channels 10 to 15 minims of phenol added to 4 ounces of water, with a little glycerin, answers every requirement. Any simple antiseptic may be used, as these tracts seem inclined to heal up quickly if kept clean.

Not infrequently do we find that the main channel running parallel with the rectum communicates with this organ at a variable distance from the anus, three to four inches being the average. I doubt whether this condition is present before the probe is passed upward, for under such circumstances abscess and true fistula would soon result, but the likelihood is that the rectal tissues are so frail and lacking in resistance that the probe, passing up between the muscular and mucous coat, can be pressed through the latter without apparent effort. This will not occur when the sound is passed upward through an incision made external to the sphincters, but when one is led closer to the anal orifice and from thence upward just under the mucous membrane.

When a channel is discovered just under the integument, or approaching the skin at its distal end, an opening should be made so as to permit the probe to pass through, and irrigation in these cases is carried on from end to end. If the tract is tortuous, several openings may be made at various points along its route, and each one treated as a short, straight sinus. Should any of the tracts not heal, a branch will usually be found somewhere along its course, and if external evidences of its presence can not be found, the main tract is laid open, at several visits, until the point is reached. Here, as also in the deeper portions and along the main channel, the tissues will be seen to be of a peculiar mahogany color, indicative of the condition described.

If the incision is made anterior to the anus, in the perineum, similar conditions will be encountered; more especially in women. Tracts into which the probe may easily be passed can be found, and when they lead upward toward the rectum, the

treatment by gradual division, as in fistula proper, is indicated.

Office visits are required every three or four days unless the patient can have some member of his family attend to the irrigation of the channels for him. If not, he is directed to take hot sitz-baths two or three times daily. If the irrigation can be done at home, it should be practised once daily, followed by a hot sitz-bath, after which the wound is to be lightly packed with gauze.

In a week he will be ready for further exploration and partial division of some of the larger tracts. This is done by anesthetizing the parts, as before, inserting a grooved director and dividing the tissues above it. An inch or more may be thus divided at each treatment. Any spots along the line of incision that do not heal promptly should be suspected of marking the junction of branch channels, and exploration be made. Many of the smaller channels will heal after a few irrigations and division need not be carried any further than seems necessary.

Bleeding is seldom annoying. If it is, the bleeding points are ligated and the stitch removed in a day or two. After each treatment the wound is irrigated and lightly packed with gauze and a T bandage applied.

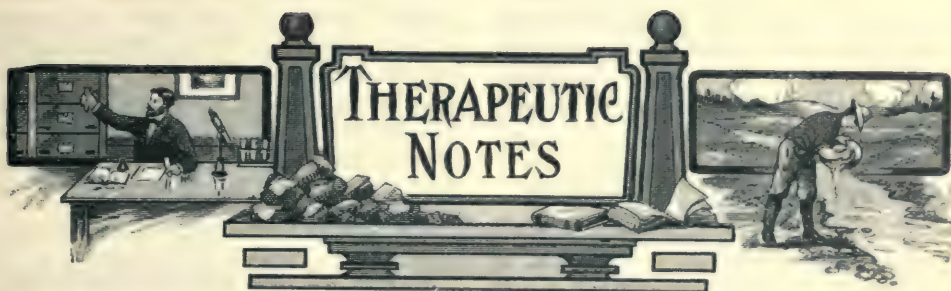
Sufficient has been said to indicate the principle involved in this method of treatment, although there are necessarily many minor details omitted. While this treatment is going on, hot rectal irrigation is practised at home, and as a result, the mastery is gained over the most treacherous disease of the anorectal region. Normal conditions are restored within, and such symptoms as anal or scrotal pruritus are immediately checked and in a short time disappear entirely. It is not unusual to find the pruritus disappear after the initial incision, evacuation of the imprisoned secretions and thorough irrigation, and in no single instance have I ever failed to relieve the condition entirely. When one considers how helpless we have always been when confronted with a genuine case of anal pruritus, the wonderful advance which this method of treatment represents can be the better appreciated.

(To be concluded.)

[This paper will be concluded next month. In the remaining installment Dr. Albright discusses the relation of proctitis to hemorrhoids and fissure and throws an entirely new light on the etiology and pathology of these common rectal ailments.—ED.]

THIS is a law: That thought without subsequent action is useless. So—Do the thing. It is better to be partly right in practice than perfectly right in theory. Better, action that is sixty percent right than inaction that is one hundred percent perfect. Don't think too long without acting. Do it.

—System



NEURASTHENIA IN GENERAL PRACTICE

Dr. H. B. Anderson, of the University of Toronto, writes interestingly on the above subject in the December, 1909, number of *The Canadian Practitioner and Review*. As for the treatment outlined, his plan is very properly symptomatic and individualizing. We should have wished that more stress had been placed upon the importance of "cleaning out and keeping clean." The neurasthenic with his diminished vitality must above all be protected against autointoxication from retained remnants of food as well as retained secretions.

LEAD COLIC

A young painter was seized with violent colic, resisting all treatment, leaving him the prey to cruel tortures. For this Andrière prescribed inunctions with sulphur ointment, and a granule of hyoscyamine every half hour for four doses, then every hour till effect. In six hours his bowels acted and he was immediately relieved.

Clayton reported this case: A painter, aged 20; face pinched and pale, obstinately constipated for four days, mouth bitter, tongue yellowish, sense of weight in epigastrium, anorexia, borborygmi, atrocious pains in the belly, increased by slight pressure, the abdomen retracted. His lamentations were incessant. Prescribed hyoscine and atropine, a granule each every quarter hour, till calming effect; croton oil, 4 drops in soap pills; black coffee as soon as it could be retained. When twelve granules had been taken the pangs had notably lessened.

Half the croton oil was then given with plenty of coffee. At 9 p. m., five hours after the doctor was called, the bowels acted, the pains not being entirely relieved. The rest of the croton oil was then given and the granules resumed. The second movement afforded complete relief, with prolonged sleep. He resumed work in ten days.

PHENOL

Dr. Robert Gray, in *Albright's Office Practitioner* (December 1909), condemns the use of aqueous solutions of phenol as dangerous. He has employed a mixture of equal parts of phenol, camphor and chloral hydrate in all sorts of wounds, without any untoward effects and has always obtained excellent curative results.

ARSENIC IN TUBERCULOSIS

Prof. Robin has made a recent communication to the French Academy of Medicine (*Gazette des Hopitaux*, 1910, No. 8) concerning his well-known theory that the demineralization of the organism is not only a predisposing factor in tuberculosis, but also a pathognomonic characteristic of the disease. It follows that the loss in mineral salts must be made good to the organism, and to that end Robin claims that both the rest-cure and the method of graded labor are dangerous. Forced feeding likewise may, in his opinion, have disadvantages. The indications are best met by the administration of earthy alkalis, while the demineralization is prevented by arsenic. Robin has found arrhenol to be of particular benefit in this respect. As for us, the remedies which

suggest themselves to meet these indications are calcium lactophosphate and strychnine arsenate—since the tonic action of strychnine is usually clearly called for. And to these we may add nuclein.

QUININE IN THE TREATMENT OF PEMPHIGUS

Dr. Rob. Bergrath (*Muench. Med. Wochenschr.*, 1910, No. 1) discusses the hopelessness of therapeutic methods in vogue in the treatment of pemphigus. Arsenic, recommended especially by Hutchinson, also strychnine as advocated by Neisser, have been useless in his hands. Mosler (*Deut. Med. Wochenschr.*, 1890) claims to have observed a cure after the administration of 40 Grams of quinine. The author reports a number of cases of pemphigus treated in the University Skin-Clinic in Breslau, in which the customary methods were employed in vain. Quinine hydrochloride, given in doses of from 4 to 8 grains three and four times daily, produced excellent results, the patients being discharged either cured or on the way of being cured.

CONCERNING PREPARATIONS OF BROMINE AND SABROMIN

Sabromin is the calcium salt of dibrom-behenic acid (Schepelmann, *Deut. Med. Wochenschr.*, 1909, Nos. 50 and 51). It is tasteless and odorless, and is easily borne. It is given in tablets of 15 grains three times daily, one hour after meals. There is no cumulative action, and no symptoms of bromism have been observed.

SABROMIN IN EPILEPSY

Sabromin is a preparation of similar combination as sajodin. It is recommended against epilepsy by Bratz and Schlockow (*Deut. Med. Wochenschr.*, 1909, No. 27). Sabromin causes much less cutaneous disturbances than do the alkali combinations of bromine. In cases where potassium bromide or Erlenmeyer's mixture have produced a favorable effect, but where these

remedies cannot be continued on account of skin affections, where arsenic together with the usual care of the skin remains without results, the alkali bromides are properly replaced by sabromin. Since this is more effective than the potassium salt, about one-third of the dose of the latter suffices to obtain like results.

A CASE OF NERVOUS EXHAUSTION

Lelievre tells of a nun, aged 50, confined to her bed for four years with profound debility, anemia and indigestion, but neither fever, emaciation nor pain. He commenced by giving strychnine arsenate, four to six granules a day. This was continued many months, the patient digesting food a little better and feeling herself less feeble at times. The doses were increased to 20 granules per day. A little benefit followed, but not health. The doses were raised to 40 granules a day, or 2 centigrams. Here little twitchings of the members were manifest. Strength was returning, the digestive functions were much better. Constipation was combated by rhubarb and magnesia. The dose was still increased until for six months she took each day five centigrams of strychnine arsenate, sometimes 0.06. The latter dose caused little shocks in the members and she could not control her movements. She was now in good health. The doses were slowly lowered until 0.02 a day were taken.

BISMUTH SUBNITRATE CONTRAINDICATED IN NURSINGS

Barabacchi (*Gaz. deg. Osped.*, 1909, Nos. 4 and 5) has published a review on the action of bismuth subnitrate. Repeating the experiments of Boehme, he found that nitrites and nitrous acid are formed out of the bismuth salt, at room temperature as also in the thermostat. The presence of staphylococcus aureus and albus may promote the dissociation. After milk diet the feces mixed with bismuth subnitrate were placed in the thermostat and considerable amounts of nitrous acid were found to have

formed. Hence the use of the drug may be dangerous in nurslings, since they are fed exclusively with milk.

CALCIUM SALTS IN THE TREATMENT OF EPILEPSY

The Lancet (London) for Jan. 8, 1910, page 118, reviews the results so far obtained in the treatment of epilepsy with calcium salts, which according to Italian investigators forms the etiological treatment of the disease. While some good results have been reported and several cases of epilepsy have been cured with large doses of calcium lactate, other reports showed entirely negative results. *The Lancet* concludes that "while the calcium method has not perhaps come up to expectation it is surely worthy of further and extended trial. It may be especially serviceable in those not uncommon varieties of severe petit-mal that are described, for instance, by Mr. Littlejohn in *The Lancet* for May 15, 1909, and in which he reports to have seen favorable results from the administration of calcium salts.

THE ACTION OF THE NITRITES

Mathews has found that the blood pressure after a dose of glonoin begins to fall in one minute, after sodium nitrite in 5 minutes; after erythol nitrate in 5 1-2 minutes. The fall in millimeters is practically the same, being slightly less with glonoin. With it also the pressure begins to rise almost immediately after the maximum fall has been reached, and the effects have completely subsided in thirty minutes. Sodium nitrite maintains its effect for about two hours; with erythol nitrate the blood pressure does not return to normal until after five or six hours.

REPEATED ATTACKS OF SCARLET-FEVER IN THE SAME INDIVIDUAL

H. Weissenberg (*Arch. f. Kinderhik.*, Vol. 52, Nos. 1 to 13) reports seven cases, among which one out of his own practice, of

scarlet-fever occurring repeatedly in the same individuals. It appears that later attacks are more severe. Dr. Zappert, who reviews the article, says that he has seen a case of an undoubted second attack of scarlet-fever in a child. The literature on such cases is very meagre.

We should be glad to learn of such cases if our readers know of any. We have seen other acute exanthemata occur repeatedly in the same individuals, but never scarlet-fever.

HOT BATHS IN CHLOROSIS

Ferrario (*Gazz. deg. Osped.*, 1909, p. 1109) advocates hot baths as a valuable adjunct to the iron therapy in chlorosis. They are given best in the form of hot-air-baths lasting for from one to one and one-half hours. By this means the increase of hemoglobin and eventually of the number of red cells is promoted, this occurring more rapidly than with iron alone.

SOME POTENTIALITIES OF SUNLIGHT

Dr. Herbert T. Webster of Oakland, Cal., writes interestingly upon the above subject in *Ellingwood's Therapeutist* for January, 1910. He claims that the therapeutic properties of sunlight rival, if they do not excel, all that has ever been discovered by the devotees of radium and the x-ray. Sunlight, properly applied, surpasses both these agents in the cure of epithelioma and other superficial malignant growths, will do the work in less time, more reliably, is comparatively costless, and is at the service of every physician who is able and willing to invest a dollar in a common reading glass, and who can get his patient where the sun shines. Concentrated (focused) sunlight not only acts as a reliable cauterizant, destroying whatever tissue it is concentrated upon, but it leaves behind it a supreme healing power which enables the base of the destroyed tissue to recuperate itself rapidly. There is no other remedy comparable with it for restoring rapidly the vitality of an ulcerated or abraded surface.

The author relates the histories of a number of cases which he treated successfully with sunlight, combined with local applications; among them are, besides epithelioma, especially all forms of pharyngitis, also burns and other traumatic superficial ulcers.

Sunlight has long been known to possess considerable healing power, and is now extensively made use of, in tuberculosis-sanatoria for the treatment of tuberculous pharyngitis and laryngitis. The present writer recalls having used it with good results in the treatment of warts and other skin lesions. It is certainly worth considering, especially in indolent ulcers, and, after Dr. Webster's experience, in lesions suspected to be malignant.

QUASSIN AND ITS ACTION

Compardon found that quassin in moderate doses increased the secretion of saliva, bile, urine, and, perhaps, the milk. It aroused the action of the digestive muscular fiber, that of the uropoietic apparatus and of the bile-ducts, augmenting mucous secretion and facilitating the excretion of normal secretions. With the sick, as a bitter tonic it arouses the appetite, renews the forces and facilitates normal excretion, rendering defecation easier and hastening the expulsion of renal and hepatic calculi. In doses exceeding 0.15 Gm. it determines symptoms of intoxication, local and general, with nausea, vomit, diarrhea, vertigo, febrile agitation, cramps and convulsions; remedied by chloral internally and chloroform externally.

DELIRIUM TREMENS TREATED WITH VERONAL

Dr Fritz Moeller (*Berlin. Klin. Wochenschr.*, 1909, No. 52) gives to his patients with delirium tremens or delirium tremens incipiens 15 grains of veronal immediately upon his arrival. If no sleep follows, but which rarely fails to occur, another 15 grains is administered after three hours. The patient then generally goes to sleep for from six to twelve hours, awakening quiet and

without delirium. If any tremor persists, he receives 7 grains more of veronal. This ends the treatment in the majority of cases.

A better way to control these cases is to administer a hypodermatic "shot" of hyoscine-morphine, just enough to control the excitement and induce sleep. As soon as possible promote elimination by bowels and skin; then brace them up.

OLEIC ACID IN HEPATIC DISORDERS

Dr. Pièrre Girard (*La Province Médicale*, 1910, No. 4) attributes the well-known favorable action of olive oil in biliary calculus to its content of oleic acid. He has used the latter in a number of cases, not only of calculus and the hepatic colic thereby induced, but also in icterus and other hepatic disorders, and has found that oleic acid acts as a highly energetic cholagog. In hepatic colic one capsule containing 22 1-2 grains of oleic acid exerted a sedative action. The dose was repeated every four to ten or twelve hours. In infections of the hepatic passages and in general septicemias with danger of hepatic localizations the oleic acid was also found of value.

A CASE OF ASCITES

Froment said: A woman, aged 42, emaciated, very feeble, skin dry and earthy, pulse small and jerky, breathing short and difficult, no appetite, poor digestion, the little she swallows almost immediately rejected, frequent painful discharge of a few drops of reddish sedimentous urine, excessive distention of the abdomen with fluctuation, the vulva edematous. The patient was discouraged and looked to her speedy death, and it seemed as if this view would prove correct. The malady was of five months' duration, beginning with sharp pains in the lower abdomen and bladder, and notable oliguria. This subsided in a few days but recurred many times, the abdomen gradually enlarging.

This was the treatment: Strychnine arsenate, scillitin, a granule each, together, every half-hour; but later reduced to hourly

intervals. After a bad night, the next morning the patient voided about three pints of fetid urine with much sediment, and she felt better. Pulse small and fast. Squill and digitalis were applied to the skin of the abdomen, with poultices. Strychnine arsenate, digitalin and scillitin, a granule each, were given every two hours; with milk diet, and sodium bicarbonate, one Gram in water as a beverage. During the following twenty-four hours the patient rid herself of $5\frac{1}{2}$ liters of urine similar to that described; breathing became easier, the abdomen smaller and softer, the pulse improved; there was no appetite; the urine was not albuminous. On the next day five liters of urine were passed and all the symptoms moderated. The improvement continued, the urine becoming clearer each day, so that by the eleventh day of her treatment it was reduced to $1\frac{1}{2}$ liters each twenty-four hours; the abdomen was of normal size, appetite good, the strength restored. She passed 36 liters of urine in ten days. Two years later the cure had proved a permanent one.

This case was possibly one of urinary retention with enormous vesical distention, rather than ascites. The patient persistently refused the use of sound or catheter.

THE INTERNAL USE OF POWDERED KAOLIN

Dr. Max Nassauer (*Muench. Med. Wochenschr.*, 1910, No. 2) writes enthusiastically on the possibilities of powdered kaolin in ulcerative conditions and in bacterial affections of mucous membranes. After its successful use in leucorrhea (*ibid.*, 1909, No. 15) it has since been employed in acute rhinitis and also internally for diarrhea, for rectal ulcers, etc., with highly satisfactory results.

The method appears to be distinctly worth trying. There is no reason why the powdered kaolin, administered even in large doses internally, should do any harm, and there exists every reason why it should be a very efficient remedy in diarrhea and in other conditions in which the intestinal

mucous membrane is irritated. The possibility of inducing intestinal obstruction should not, however, be lost sight of.

Dr. Nassauer has devised a siccator for the application of kaolin to the nostrils, vagina, rectum, etc., which sells for a little more than one dollar in Munich, and which, no doubt, can also be obtained in this country.

ZINC PHOSPHIDE THE TREATMENT OF HERPES ZOSTER

In *The Medical Summary* Dr. Edward Gray suggests veratrine in the treatment of herpes zoster as a means of reducing congestion of the spinal cord. He suggests doses of one milligram every two hours or hour, reserving zinc phosphide for milder cases or later stages of the disease. It would be interesting to know the effect of gelseminine in this malady. In all cases it is wise to begin the treatment by eliminating from the case the element of fecal toxemia, that is by clearing the bowels and keeping them clear and aseptic.

THE IMPORTANCE OF THE SEQUELAE OF MEASLES

Dr. Ellingwood, in his *Therapeutist* for January, 1910, calls attention to the fact that the conditions that follow measles are fully as serious, if not more common and dangerous, than those of scarlet-fever or other exanthematous fevers. The doctor's warning is timely. People are all too prone to neglect an attack of measles, and often do not even call in the services of a physician. They do not realize that so many troubles of ears, bronchi, etc., with which children are often afflicted, are due to carelessness during measles and could have been prevented. Dr. Ellingwood mentions bronchitis, bronchopneumonia or croupous pneumonia in children as frequent sequelae, and to these diseases we would add tuberculosis of the lungs, since rubeola in a great number of cases is an important etiological factor in the activation of a latent tuberculous focus, and frequently unsuspected.

SURGICAL AND GYNECOLOGICAL NOTES

BY EMORY LANPHEAR, M. D., LL. D.

CHECKING THE SECRETION OF THE LACTATING BREAST

Storrs states (*Surgery, Gynecology and Obstetrics*, Oct., 1909) that since 1904, in the Obstetrical Department of Johns Hopkins Hospital, an entirely expectant treatment has given the best results when it was found necessary to dry up the breasts after confinement. The breasts are left absolutely alone after delivery, being at most supported by a loose bandage if they are pendulous. Perhaps once in twenty cases a simple hypodermic of morphine or codeine may be necessary to relieve pain during active engorgement. On the fourth or fifth day the secretion gradually decreases, to disappear entirely before the end of the week. Among 171 cases carefully observed (107 ward-patients and 64 out-patients), equally divided between primiparæ and multiparæ, not a single case of mammary abscess developed during the treatment as outlined.

MYXOMA OF PERITONEUM

Masses of jelly-like myxomatous tissue are occasionally found in the pelvis, with much fluid—myxoma of the peritoneum. Examination of the omentum will show it also covered with myxomata, and even the serosa of intestines may be greatly thickened and covered with myxomatous masses. It has been called "pseudomyxoma," "pseudo-myxomatous peritonitis," and simply "myxoma," but pathologists are not yet decided whether the trouble is a diffuse myxomatous degeneration or consists of true new growths on the peritoneum. It grows or spreads rapidly, sometimes with the formation of adhesions and of much thick jelly-like fluid. Women of forty or past are most often affected; and chiefly those who have borne children. It may follow rupture of an ovarian cyst, and is particularly liable to

appear when a part of certain tumors has been left in during ovariectomy, notably papillomatous cysts. When the deposits are extensive it is useless to attempt removal; one can merely clean out the largest masses and close the abdomen without drainage, thus giving temporary relief and in some instances a long respite from pressure-symptoms. When the pelvis only is involved it is worth the effort to remove every trace of the disease and thoroughly rub the peritoneum with gauze, the resulting adhesions obliterating all trace; but usually there is only temporary improvement.

OVARIAN TUMORS AND LABOR

An ovarian tumor lying deeply in the pelvis may seriously interfere with delivery, particularly when bound down by adhesions. Large ovarian cysts with their walls may be ruptured during the violent muscular exertion of labor—sometimes with much collapse. If rupture does not occur the tumor may become infected and develop serious inflammation after delivery, necessitating a life-saving operation during the puerperium. On account of these possible complications and dangers ovarian tumors should be removed during the early months of pregnancy unless they are comparatively small, are well above the pelvic brim and are freely movable. There is little danger of abortion after such abdominal sections.

UTERINE CANCER ARRESTED

In a case of advanced uterine cancer Burggraave prescribed the arsenates of sodium, potassium and strychnine as modifiers of nutrition; iodoform, cicutine and morphine for the lancinating pains; aconitine, quinine and digitalin for the fever; quassin for the dyspepsia. He asserted that by this treatment the cancerous process was ar-

rested and the tumor transformed into a simple fibroma. The very free metrorrhagia ceased, as well as the discharge, there were no more pains, the digestive powers were restored and nutrition resumed its normal course. The operation which had been ordered was postponed indefinitely. This was not really cancer—as yet. The diathesis was manifest but only in the dynamic stage.

A CASE OF ECLAMPSIA

Birabent describes the case of a primipara. He gave hyoscyamine and strychnine, four granules each every ten minutes, quinine hydroferrocyanide, six granules every quarter hour, with two of brucine; and a small dose of morphine and potassium bromide every five minutes. Under this treatment in half an hour the neck softened and the os dilated. The third spasm then followed, less severe than the preceding. The waters were broken; a fourth attack followed, still milder, and the child was delivered with forceps during the fifth convulsion. The child was asphyxiated but revived. For some hours the treatment was continued with lessening doses and longer intervals. Somnolence remained on the next day but there were no more attacks. Hyoscyamine and strychnine dilated the os, quinine banished the access, the bromide sedated and morphine calmed.

A POWERFUL ENEMA

For the parietic bowels, sometimes so alarming after abdominal operation, an enema of this composition is often effective:

Magnesium sulphate..	64 (ozs. 2)
Glycerin	64 (ozs. 2)
Oil of turpentine.....	16 (oz. $\frac{1}{2}$)
Water	192 (ozs. 6)

This is to be thrown as far up the sigmoid as possible through a long colon-tube.

CYST OF OMENTUM

A cystic tumor of the omentum may lie so low in the pelvis as to simulate an ovarian

growth. In rare cases the omental tumor may grow so large as to closely resemble ascites. The fluid in these omental cysts usually resembles blood-serum, but occasionally much pure blood is found, indicating recent intracystic hemorrhages. On section the cyst-walls are found to consist of infantile omental tissue composed of small fat-cells between which lie loosely connected fibrillary connective-tissue strands. Usually the mass is pedunculated and therefore readily removable without danger.

THE TREATMENT OF WARTS WITH KELENE

Dr. Buedinger (*Muench. Med. Wochenschr.*, 1909, No. 37) advocates the treatment of warts with a spray of ethyl chloride. The wart is treated with the spray until frozen. The application must be repeated two or three times, when the growth partly falls off, partly shrivels up. Our readers are doubtless familiar with the sodium ethylate, which we have repeatedly recommended and which is generally efficient.

WOUNDS OF THE CORNEA

A neglected wound of the cornea may entail loss of the eye, whereas prompt and proper treatment may preserve vision. Traumatism of the cornea may be a slight scratch, a small puncture or a large wound opening up the anterior chamber freely, either with or without leaving a foreign body in the lacerated tissues. Fragments of coal, stone, splinters of iron, wood, etc., visible either by simple inspection or lateral illumination, should be removed with the least possible delay, after anesthetization with a 4-percent solution of cocaine, with incision if the foreign body is deeply situated or firmly fixed. After incision a little 3-percent ointment should be smeared over the cornea and into the lower cul-de-sac and the eye kept bandaged for two or three days.

Erosions and pricks apparently trivial often set up serious symptoms: sharp pain, photophobia, intense congestion, etc., with more or less loss of corneal epithelium; if no

grave infection (besides staphylococcal) occurs healing will follow in a few days under simple cleansing with saturated solution of boric acid every four to six hours, but if gonorrheal or streptococcal germs be engrafted upon the primary pus-infection the entire eye may be lost from a very trifling injury.

In these last-named cases pus soon collects in the lower part of the anterior chamber (hypopyon keratitis) and the ulcer soon presents a yellowish gray color and shows a marked tendency to become serpiginous. In these, and in the severe injuries, the eye and lids should be washed with 1 in 6000 cyanide of mercury solution. Three times daily two drops of a half of one-percent solution of sulphate of atropine should be instilled, followed after the lapse of a few minutes by the application of the iodoform ointment.

If the infiltration shows a tendency to spread, the eye should be anesthetized with cocaine and the entire surface and edges of the ulcer gently burned with the thermo-cautery or galvanocautery. If the pus accumulates in the anterior chamber it must be let out by an incision at lower margin of the corneoscleral junction; and if the pus does not then escape it must be removed with a pair of curved tweezers. This must be followed by frequent washings and application of the iodoform ointment. If conjunctivitis or dacryocystitis exists appropriate treatment must be directed thereto.

Penetrating wounds are more serious on account of probable injury to iris or lens, with succeeding iritis or iridocyclitis a probable cause of blindness; prolapse of the iris into the wound being also a frequent complication, and more or less impairment of vision from corneal scars inevitable. Injury to the lens is followed by traumatic cataract, absorption of the fluid of anterior chamber causing opaqueness; this disappearing in young people by absorption, but rarely so in the elderly.

Careful efforts at disinfection of the lesion with the solution of cyanide of mercury are, therefore, imperative as soon as possible after injury, and these should be fol-

lowed by frequent instillations of 5-percent solution of collargol and application of hot bichloride compresses; any protruding iris being cut away and further protrusion prevented by use of atropine three or four times a day. Traumatic cataract going on to panophthalmitis means that enucleation will become necessary; if it progresses favorably the lens may be extracted three or four months later.

GERANIUM FOR REMOVING NASAL POLYPUS

Frank Webb treats nasal polypus by hypodermic injections of the specific tincture of geranium (*Eclectic Medical Gleaner*, September, 1909, page 398). He has cured three cases with it, one of whom had been operated upon. He injects about thirty drops of the tincture into the mass of the polypus, warning the patient that it will set up an inflammation, which will, however, subside in a few days. In all cases the polypus shriveled up and came away with the pedicle. There has been no return of the polyp.

ANTISEPTIC INHALATION IN PULMONARY TUBERCULOSIS

Robin, in a communication to the French Academy of Medicine (*Gazette des Hôpitaux*, 1910, No. 8), says that he has found the iodide of allyl to be an efficient local antiseptic in pulmonary tuberculosis. Since it is irritating to the respiratory mucosa, he has, together with Dr. Gautier, searched for a combination in which this disadvantage would be obviated. The authors now offer the following formula, which he considers satisfactory:

Allyl iodide, from 1 Gram to 4 Grams; hydrofluosilicic acid, from 2 Grams to 6 Grams; gomenol (or eucalyptol), 10 Grams; decoction of carrageen, sufficient to make an emulsion; boiling water, q. s. ad 1000 Grams. The solution is used for inhalation by finely divided spray and is markedly antiseptic.



Apocynum Cannabinicum

A Contribution to Its Action

By **DR. FELIX-KRAMER** of Frankfort-on-the-Main

THE fluid extract of Canadian hemp, the root of which plant has been used for a long time, as a medicine, in Asia and America and in the last decade also in Russia, does not seem to have obtained in Germany the attention it deserves.

The active principle of this drug, according to Liebreich and Langaard, is a glucoside called apocynin, whose action is, like that of digitalis, a cardiac poison. Like strophanthus, nerium oleander, and vinca minor the plant belongs to the Apocynæ family.

The reports on this remedy so far as I have been able to follow them are unanimous in designating it as a cardiac tonic and diuretic. According to Gwovdinski of Kiev apocynum cannabinicum is known in Virginia as a household remedy and is used by some American physicians by preference as a diuretic. The dose according to this report is 15 drops, t. i. d., and given during the period of compensatory disturbance it causes no unpleasant side-effects.

According to Aleksejew the effect of the remedy appears, in proper cases, in two or three days. If no remedial action appeared in five days Aleksejew made no further use of the remedy. He prescribed small doses (from three to five drops) three to four times a day. After larger doses he met at times gastric disturbances and pains in the cardiac region. Cumulative effects he did not en-

counter. The dosage, according to Golubin, is five drops three to four times daily.

In Pawinsky's (of Warsaw) notices about apocynum cannabinicum the observations he made of the different effects of this remedy from those of digitalis on the vâgus are remarkable. He found that apocynum cannabinicum acts more readily and energetically on the innervation of the heart than digitalis, but the effect of the latter is a more persistent one, that is to say, the effect of apocynum gives out more rapidly than that of digitalis. He would, therefore, use the remedy at shorter intervals, especially in cases of arrhythmia.

His dosage is somewhat higher: eight to ten drops of the fluid extract two to three times a day. However, one should always begin with small doses. Pawinsky rarely met with unfavorable effects on the digestion from this remedy, of which effects some authors speak very extensively. Cumulative effects he found none.

The indications for the remedy are, according to him, valvular lesions and affections of the heart muscle at the time of disturbance of compensation. A. Robin gave thirty drops of this remedy three times daily.

A case in which the extract of apocynum utterly surprised me was as follows: A tavern keeper, 51 years old, who was affected with arteriosclerosis, myocarditis and a high

grade of indurative hypertrophy of the liver. The edema and ascites could not be removed by the administration of the following remedies, viz., digalen, digitalis, digitalis with diuretin, alternated with caffeine, strophanthus, theocin, theophyllin, fluid extract *equisetum arvense*, infusion of juniper, and treatment with calomel.

All these well-proven remedies were often administered in maximal doses. At times the fluid exudate would be reduced to a minimum (1200 grams). Before paracentesis abdominis was made the fluid extract of *apocynum cannabinum* was tried, and with perfectly surprising results. The next day, twenty hours after the administration of the remedy, the swelling of the legs, especially of the right one, was reduced and showed natural relations of parts. The ascites too was reduced, but the swelling of the liver remained stationary.

The dose used in this case was 12 drops, three times a day, gradually increased to fifteen drops at a dose. In spite of this improvement the swelling of the legs reappeared after four days. It is remarkable, however, that in a case where all other diuretics failed the *apocynum* should have shown such an almost magical effect. It is therefore explainable why Busch designates this remedy as the vegetable trocar. Such a remedy certainly deserves to be retried and administered in cases of compensation-disturbances before paracentesis abdominis is resorted to. Should clinical retrial of the remedy be further confirmed then the textbooks should give it a place among the other well-tried diuretics.—*Muenchener Med. Wochenschrift*, No. 45, 1909.

PEROXIDES AND PERSALTS IN MEDICINE

Dr. Brichta of Vienna spoke before the Assembly of German Scientists and physicians at Salzburg on the supplying of oxygen to the body with the peroxides. The author saw in the lack of oxygen one of the causes of various illnesses. He desired to prevent the damage done by the want of sufficient oxygen by its administration.

Inhalation he thinks must be supplemented by internal administration. For the latter the magnesium peroxide is most suitable. By the test with methylene-blue the author demonstrated that oxygen and hydrogen superoxide become free in the stomach and bowels when this is administered. The physiological effects are increase of blood-coloring matter and of the blood pressure, increase of renal secretion, increase of intestinal peristalsis, and a favorable influence on the gastric secretions. The author made tentative use of this substance in about 100 cases of various gastric and intestinal affections, and obtained favorable results.

Besides this peroxide (known under the trade name of magnodat) the author uses zincodat (zinc superoxide) and obtained favorable results from it in the eczema and intertrigo of children; he also found a substitute for boric acid and perhydrol in ear troubles in borodat.

Lastly the author found in magnodat a superior means of keeping milk from spoiling without affecting the taste of the milk. The author recommends the odorless borodat as a disinfectant especially in the sick-room and hospitals.

In the discussion that followed Winternitz of Halle remarked that magnesium peroxide has been known for some time, but it is difficult to decide in peroxide salts what the effective ingredient is, whether the alkali or the hydrogen peroxide. Petri however found in the Clinic of A. Schmidt that hydrogen superoxide by itself in 1-4 to 1-2 of a percent in solution is capable of reducing gastric acidity to complete neutrality by the production of mucus and not by reducing the hydrochloric-acid reaction. Coupling the hydrogen superoxide with an indifferent remedy such as agar-agar, Schmidt was able to materially influence intestinal fermentation.—*Muenchener Medizinische Wochenschrift*, 1909, p. 2183.

HEMOPHILIA

Drs. Morawitz and Lossen (Heidelberg) examined the case of an hereditary bleeder of which they gave a full account before

the Congress for Internal Medicine in Vienna, Austria, April 6 to 9, 1908.

The patient belongs to a family of bleeders in which many a member of it died from this affection. The patient came to the clinic for help against bleeding from the gums. Twenty Cc. of blood was taken from the median vein. (It is known, since the discovery by Weil, that puncturing of a vein is not dangerous in a hemophilic.) It was found in this case that the time for coagulation was between five and seven times longer than normal, which is about fifteen minutes, but the patient's blood requiring about two hours. This retardation is due to a deficient production of the fibrin elements in such blood, especially that of thrombokinase.

Fibrogen does not seem here to be essentially diminished. The anticoagulative substances which are normally present in the serum of the blood could not be discovered in that of this patient. It is likely that in a hemophilic we have to deal with a chemical degeneration of the entire protoplasm.

Lomel of Jena recommends Sahli's method, which is that of the injection of normal animal serums. In one case of very severe nose bleeding he injected hypodermically 20 Cc., when the bleeding stopped immediately. In ten days the bleeding occurred again and another like injection stopped the bleeding permanently.

In commenting upon the foregoing, Schwalbe of Berlin called attention to the old attempts of introducing into a hemophilic the blood of normal persons and which had proven effectual.

Pick of Prague mentioned the case of a hemophilic who was the sole survivor of a family of nine. The male members died on the battlefield and the females in parturition. The one survivor had bleeding from the kidney. Examination of his blood disclosed pronounced poikilocythemia, but when the patient would bleed till it finally stopped by itself [*blutete der patient sich aber aus*], the number of erythrocytes was normal (about 6,000,000).

Falta of Vienna stated that in a hemophilic case of Von Noorden's clinic he has

found during the intervals of cessation a retardation of coagulation, but that during the bleeding attacks (severe gastrointestinal bleeding) the time of coagulation was normal.—*Wiener Medizin. Wochenschr.*, 1908, No. 40.

RECTAL INJECTIONS OF PARAFFIN FOR HABITUAL CONSTIPATION

One of the treatments of habitual constipation much used in Germany consists in enemas of oil according to the well-known method of Fleiner. But in spite of the incontestable advantages of this procedure it is not devoid of inconveniences. It soils the clothing, obliges the patient to stay in bed after taking the injection to prevent the escape of the oil, often produces a distressing sensation due to the escape of malodorous gases formed by the decomposed oil, and it may also cause intestinal irritation.

At a recent meeting of the Berlin Society of Medicine, Dr. Lipowski, the chief of the Urban Hospital of the Deaconesses at Bromberg, made known a way by which the inconveniences of the oil injections could be avoided while at the same time keeping and even amplifying their useful effects. It consists in simply injecting into the rectum by means of a syringe and a soft rectal tube introduced to about twenty centimeters (8 inches) a mixture of one part of solid paraffin and eight parts of fluid paraffin. Before making this injection, which the patient can introduce himself while sitting on the edge of a chair, this paraffin mixture (which is fusible at 38°C.—about 100.4°F.) is to be liquefied in a water-bath or by any other convenient means. Of this mixture 200 Cc. (about 6½ drams) is to be injected each time. The injection is made at night on going to bed.

The paraffin is devoid of any irritating action on the intestinal mucosa and does not decompose. The patient is not obliged to remain in bed, because the paraffin speedily forms itself into a layer along the wall of the intestine, and differing from the oil, the paraffin does not tend to escape by the anus. The purgative action of the

paraffin is said to be superior to that of the oil.

It must be remembered that the absorption of water by the large intestines is much augmented in the case of constipated individuals, as the experiments of the author have demonstrated, which are as follows: Inject by means of a soft rectal tube and with feeble pressure, while the patient is in a sitting position, 200 cubic centimeters of physiologic salt solution, compress the exterior end of the tube, and let the liquid stay in the rectum for about fifteen minutes. On reopening the tube to let the injected liquid out you will find that the rectum of a person which functionates normally has not absorbed more than from 30 to 90 Cc. (8 to 25 drams), while a constipated person will absorb from 150 to 180 Cc. (40 to 45 drams).

This exaggerated absorption of water explains the rapid hardening of the fecal matter and its retention in chronically constipated individuals.

Dr. Fleiner long ago attributed to oil the faculty of diminishing the absorbing power of the large intestine, and paraffin is according to Dr. Lipowski still more efficacious in this respect.—*Berliner Klin. Woch.*, July 19, 1909.

SIDE-ACTIONS OF NEW REMEDIES

III. REMEDIES ACTING AS HYPNOTICS, ANESTHETICS AND NERVINES

Alypin.—In instillations in the conjunctival sac there frequently is complaint of burning stronger than that felt from instillation of cocaine solution. Simultaneous with the burning there is more or less reddening of the conjunctiva which, though soon passing off, may nevertheless occasion unpleasant hemorrhages in operations on the eye, so that here it is advisable to use cocaine. In local applications to mucous membrane of the mouth, throat and larynx, there is often, in sensitive persons, a disturbing sense of a very bad taste from alypin. Injecting this remedy into the gums sometimes produces necrosis, and the injection occasionally is very painful. In the endermatic application of alypin there is injury to the

tissues, while with respect to painlessness it is surpassed by novocaine. It is also said that it may produce headache.

Andolin.—This mixture of eucaïne, stovaine and adrenalin is not suitable for regional anesthesia because in one case it produced blisters in the places where injection was made.

Bromalin.—Baucke observed an increase of the epileptic attacks in one case.

Bromeigon.—The bromeigons (which have egg-albumin as an ingredient) do not act as promptly as the alkali bromides, nor do they prevent bromism.

Bromipin.—Lorenz saw in one case an increase of epileptic attacks from it, and it acts slower than alkali bromides. Preparations of bromipin that have become black should not be used.

Bromural.—It fails to act in cases of pain, cough, angina pectoris, excitement, and delirium. Unpleasant effects of stupefaction, aversion to sleep, and a sense of heaviness in rising from sleep were also noticed in some cases.

Ethyl Chloride.—According to Seitz there is one death to every 6000 of narcosis with ethyl chloride. Contraindications for its employment are noncompensated heart lesions, heart-muscle disease, pericarditis, alcoholism, and hysteria. In accidental poisoning with this remedy artificial respiration is of high importance, and enemas of sodium bicarbonate solution are said to act favorably.

(To Be Continued.)

EGYPTIAN HYOSCYAMUS

This drug as found in commerce is in three forms: (1) stems from which the greater part of the leaves were removed; (2) pressed cakes, consisting mostly of leaves with very few leaf-stalks; (3) unripe seed-capsules, some of these containing a few seeds. The drug is derived from the *hyoscyamus muticus* L. and is especially valued for the high amount of alkaloids it contains. The Egyptian henbane can easily be distinguished from the ordinary *hyoscyamus niger* by the structure of the trichomes of its leaves.—*Pharmazeutische Zentrallhalle*, 1909, p. 474.



How I Became a Dosimetrist

ABOUT 1884 Dr. W. T. Thackeray told me what Dosimetry was doing and asked my opinion of it. My reply was "anyone making such statements must be a knave or a fool." He asked me as a favor to him to send to Fougere in New York for Chanteaud granules of aconitine, digitalin, hyoscyamine and strychnine arsenate and use them as he indicated in my next case of pneumonia in the first stage. "Of course," he said, "you can leave them at any minute that you wish and resume your stand-by." I sent for them and some Burggraave literature which I studied, and carried the granules in my pocket. The first case was V. V., 50, miller, first stage of pneumonia of lower right lobe. Temperature 102.5° F. Patient had taken generously of salts, the intestinal canal seemed well cleared. I put the four kinds of granules in small dishes, directed temperature taken every two hours, ordered one each of the granules every one-half hour while temperature was above 102.5° F.; every hour while it was between 101° and 102° F., every one and one-half hours while it was between 100° and 101° F.; every two hours while it was between 99° and 100° F. The medicines were to be omitted when the temperature was below 99° , but resumed should fever rise again.

This was at 10 a. m. I called twenty-four hours later. V. was sitting in a chair, clothed and well. But for his wife he would have gone to the mill. I ordered him to remain indoors twenty-four hours longer, and left him, deeply regretting my inability

to diagnose inflammatory lung troubles, on my correct diagnosis of which I had prided myself up to that time, for of course the granules simply could not have done that.

During the rest of that winter, and since, I either have not had a case of pneumonia in the first stage, or *the granules did do it*. I strongly suspect the latter. I began to hate them as they so often made me doubt my diagnosis.

My next "auto-proselytizing" came about like this: A servant who was a great favorite with a dozen young girls of from six to twelve years of age was taken with severe anginose scarlet fever. The day before I saw her these children had been with her about half a day. Inquiry showed that one of them belonged to a "family of name." I called on the child's mother, explained the situation and asked to be notified early should her child show any indisposition. When the time came I was called and found the child coming down with scarlet fever. I did not know then what I have since learned about calcium sulphide or we should not have waited for the completion of the incubative stage. During this stage not only scarlet fever but diphtheria, smallpox and measles can as surely be arrested by calcium sulphide as 2 and 2 make 4. The patient's temperature was about 101° F., and the patient's throat sore. I placed the calcium sulphide and febrifuge before her and directed that after the administration of a laxative they be used. The next morning the child was well. The mother re-

ported that towards night a few spots had appeared on the child's chest and neck, but they soon disappeared. This completed my reformation.

I have studied "dependable principles" ever since, my only regret is that I know so little about them. I am content to be called a fool or a knave if I can get these "arms of precision." The peace that passeth all understanding is the gift they bring to their users.

C. S. PIXLEY.

Winnsboro, S. Car.

TYPHOID FEVER

I read with interest what is being said about the treatment of typhoid fever and suppose others do also.

So I will give you an outline of the way in which I treat cases coming under my care. Let me say in starting that I do not treat several hundred cases yearly as many do, and that may account in a measure for my success, as almost all got well. Now grin and say they weren't typhoid, yet blood tests were made in some and the pathologist said that they were; there were other cases in which no test was made, but which had the same symptoms and came through the same way, so I say they were typhoid fever and treated them as such with the result that all got well. I have lost but one case in twenty years and that patient was seen late and died on the tenth day from hemorrhage.

Many doctors are much opposed to the use of the coal-tar derivatives, but more use them than one may think.

I give acetanilid from start to finish in combination with salicylate of sodium and powdered licorice. All my patients get this in small but frequently repeated doses which are governed by the rise and fall of temperature. I never allow the temperature to remain high for a long time.

I start the treatment by giving for the first three days four 5-grain doses of calomel each evening, one hour apart, with a saline the following morning. This will clean out the alimentary tract. Then I follow with the sulphocarbolates in doses sufficiently

large and frequent to keep the odor down and the passages as nearly normal as possible; a small dose (say one grain) of calomel every second day, may help matters some. I do not give many or large doses after the first three or four days, but always keep the bowels well cleaned out, and the stools odorless.

Now I do something more and do it all the time in alternation with the acetanilid compound. I give ecthol, cactus, nuclein and strychnine every six hours; combined with this, if there is any nervousness or loss of sleep, *passiflora incarnata* in doses sufficiently large to produce the desired effect and it will do it if you give enough.

Bathe as often as necessary but not too much and never with iced water.

Malted milk is preferable to sweet milk. I do not give the latter at all.

Sour milk is all right and acts well.

Some patients will complain of pain in the region of the stomach. Codeine will control this nicely and safely with no unpleasant after-effects. If this plan is faithfully carried out through the entire run of the fever this will last from fifteen to twenty-one days if it has a good start when you are called. Many cases will be aborted if seen early and treated as above, and there will be little or no tympanites, no delirium, little loss of sleep, no nervousness, a fair appetite. The bowels will cause little trouble, and the kidneys will always act well. No bedsores, a clear mind and a steady hand.

The patient will write as intelligently and as steadily on the twenty-first day as he did the day before he got sick. There will be little loss of flesh and he will be well when he gets up. With this method of treatment the blood will not become thin and there will be little nosebleed if any, and seldom if ever any bowel hemorrhage, if this treatment is commenced early and energetically carried out. This I know as I have had no hemorrhage in any case with the one exception above mentioned.

The spleen will not swell greatly and will not cause any trouble. The tongue will never get dry and there will be no accumulation on the teeth. With one exception I

never have had a case last more than twenty-two days and this one had a relapse on the seventeenth day and ran two weeks longer; the fever had been gone three days when this happened, but the recovery was just as nice as in any of the other cases.

There are many deaths from typhoid fever in our city and the surrounding country every year. I am very lucky in the cases I get or I manage them much better than others, as they lose them and I do not.

M. E. JOHNSON.

Pittsburg, Kan.

[I have generally found that physicians who treat their typhoid fever patients on the "clean out, clean up, keep clean" plan get them on their feet in rather less than the "orthodox" time, and that the patients do not run down as badly as others do.

I confess, Doctor, that your initial doses of calomel appear unduly large to me. Twenty grains of calomel in one evening, for three evenings running, would clean out a wooden Indian in front of a cigar store. But opinions differ, and you have probably found the doses allright, else you would not stick to them. Also I don't like acetanilid. With these exceptions, which rest upon a difference of opinion, your treatment is certainly "heap good medicine," and you ought to be a very successful medicine man.—ED.]

ITEMS: CURIOUS AND PRACTICAL

Inoculation against smallpox was carried out in Boston by Dr. Zabdiel Boylston in 1723. He was warmly supported by the Rev. Cotton Mather. Six deaths occurred in 286 persons inoculated—21 : 1000. There were 844 deaths in 5759 not inoculated—146 : 1000.

In the eighteenth century the following was one of the naval rations (on sea-going ships): Wine, 2-3 pint; biscuit, 1 1-2 to 2 pounds; beef or bacon, 1-3 pound; codfish, 3-4 pound; vegetables, 1-4 pound; one anchovy or two sardines; lima beans, 78 liters for 444 men—the entire crew of one ship. On fast-days, Monday, Wednesday,

Friday and Saturday, 1-4 pound cheese was allowed instead of meat.

There are three distinct types of malaria: (1) Pernicious, or aestivoautumnal, due to the *laverania praecox*; (2) tertian and double tertian, formerly known as quotidian, due to *plasmodium vivax*; (3) quartan, due to *plasmodium malariae*.

$\frac{1}{2}$ Sodium metavanadate in doses of 20 centigrams, one-half hour before meals, is recommended for anorexia.

Heinde recommends as a stimulating local application for chronic pharyngitis the following, the numbers representing parts per 1000 in glycerin: trichloroacetic acid, 8; ferric iodide, 4; potassium iodide, 7.

Zytkin uses hypodermatically for hepatic and other visceral sclerosis, 1.5 Grams of keratin in 2.5 Cc. of sodium bicarbonate solution.

Dr. Nattan Larrere of the Hotel Dieu, Paris, uses the following solution for preserving microscopic slides of urine, feces, etc., known as Amann's lactophenol solution: Glycerin, 2; water, 1; crystallized phenol, 1; lactic acid, 1.

An old notion correct: Trilbert of Paris finds that 5 Grams of cane-sugar burned under a glass bell of 10 liters' capacity produces enough formic-acetylene-hydrogen to kill typhus, tuberculosis, cholera germs, and to deodorize and destroy saprophytes in rotting meat, eggs, etc.

A. L. BENEDICT.
Buffalo, N. Y.

A SPRING AND SANATORIUM IN FLORIDA

Dr. F. B. Moodie of Lake City, Florida, writes enthusiastically about the health-giving climate of his section of the country, which is by some said to be of particular benefit for patients afflicted with pulmonary tuberculosis. From his personal experience the doctor is convinced that the water of a mineral spring which he owns is of great assistance in the climatic dietetic treatment of tuberculosis, because it in some way counteracts the digestive disturbances which frequently complicate the tuberculous disease.

Doctor Moodie was himself sent to Florida some thirty odd years ago when suffering with "incipient pulmonary consumption complicated with dyspepsia and rheumatism," and was told to find a spring of water favorable to digestion, on the very sensible theory that a faulty digestion disturbs the general nutrition and thus renders recovery from the tuberculous disease doubtful, to say the least. Dr. Moodie describes in his letters how he found "the mythical fountain of youth," which had been vainly sought by Ponce de Leon. In his own words, in less than a fortnight after finding it his indigestion was apparently gone, he could eat anything with impunity and although a physical wreck he was soon apparently "rejuvenated." Since 1883 he has been located near that spring.

The spring in question appears to have been held in high esteem by the old inhabitants who used its water against many ills; and although it has never been analyzed Dr. Moodie is convinced that the water is of great value in digestive disturbances. It is located in a beautiful spot near Lake City, which claims the lowest mortality of any city in the United States of equal population, is sufficiently far inland to be free from fogs, with nineteen days of sunshine out of twenty in winter, and where nature has been most bountiful, not only with her beauties but with the good things of life to be gleaned in field and garden. Dr. Moodie offers to turn over the spring with ample grounds, comprising five, ten or fifteen acres, for the purpose of establishing a great sanatorium for the treatment of consumptives, requiring in return only a reasonable share of stock in the enterprise.

We do not quite know how or by whom Dr. Moodie wants such a sanatorium to be built. From his description of the spring we agree with him that it "seems to act upon the mucous membranes of stomach and intestines" and that it may possess merit in some forms of indigestion. Furthermore, his contention is sound, that a good digestion is necessary for the successful treatment of pulmonary consumption. For the approved treatment of the latter disease by general

hygienic-dietetic methods the climatic and other conditions of Lake City appear to be highly favorable. We therefore pass the doctor's offer on to the readers of *CLINICAL MEDICINE* and wish him success in his plans and hopes.

AUTOMOBILE CARE AND THE DOCTOR'S STABLE

Just let me get my oar again for one short stroke. The doctor's vehicle seems to have been pretty much the topic lately, but they all more or less lack some essential to mark their ideas or methods as being more nearly perfection. The auto man tells his troubles, the horse man his. A good percentage of the auto men fail to consider the proper housing of their machines. By housing I don't simply mean the roof over them, but more particularly the outfitting of the shed. The auto shed should embrace the "make up", signified by the expression "ship-shape" and "in a nutshell." It should be planned with a similar end in view as is a ship's galley or a French kitchen. Everything compact, accessible and as far as possible insured against mishap. "A place for everything and everything in its place."

The contingencies of cold weather should be provided for, for then the man who wrote some time ago would not have found it necessary to get a kettle of hot water and thaw out his machine before he could make a call.

The horse advocate seems to be without the knowledge of how he could make things more serviceable, and therefore more ideal.

The swinging harness, such as is now used by all city fire departments and ambulances, is the ideal equipment for the doctor. Strange, how few you see in private use. For ten years now, my harness suspended was always hitched to the buggy, ready to drop over the horse's back at a moment's notice. When I came in from a drive the harness and buggy were placed in position in the carriage room, ready at a moment's notice to be under way again, hitched, harnessed and out on the road. I used to hitch up, crack the whip over the horse's back and be

on the road in thirty seconds by the watch. I have hitched "against time," with a stopwatch held on me, in 11 seconds. Now, I would like to see people beat that if they can with an auto, especially when the car has stood some time and all oil-feeds, gasolin, valves, etc., are shut off.

I fixed up the same stable outfit for a classmate of mine who practises in the country. He certainly had the natives agog by the way he could get started when he had to, even to hitching at night without a lantern. Today you could not hire him to hitch a horse the old way.

N. H. RICHARDSON.

Cleveland, O.

[This suggestion of the swinging harness is a good one. When people are sick they want a doctor and want him *quick*.—ED.]

MEDICINE AND SOCIETY

The December AMERICAN JOURNAL OF CLINICAL MEDICINE had an article, "How to Get Your Share of Business." As this question is an ever-present one, bobbing up in various guises, and fraught with much practical interest to all of us, I now ask space for a few commonplace things which may help to just conclusions in the solution of this vexed question.

In order to treat a subject, we must first understand that subject in its detail, and then clear away the rubbish of prejudice, self-interest, and conventionalism, which are sometimes enthroned in the place of Love, Truth and Justice.

The first query that arises, is, What is the medical profession, or any profession or calling? The answer to this question is very material and upon it will depend whatever of betterment we shall be able to offer. Is the medical profession a unit, a whole thing of itself, or is it a part of a greater unit or whole, which when taken apart, injures, if not destroys both? I think the statement is enough to show any fair mind that we are but a part of the great body politic, and to know our functions, we must study the organization of that body and abide

in it, as the branch abides in the vine. We can no more promote the growth and development of our profession at the expense of organized society, than the branch can grow severed from the vine.

Flowing from these primal truths comes first a common interest, linking together every trade, calling and business into one common brotherhood, making the interest of each the weal of all, so that so long as harmony prevails, good ensues, while the very first discordant note trills in rebellion.

Now let us consider some of the ills we complain of in the light of these premises. What do the professions and trades owe to the great mass of humanity in which their destinies are cast? To conserve their true and full interests in their respective lines. What is due on the other side? Full and ample support, measured by the interest of all concerned. Remember, the highest authority, the court of last resort, is the "*genus homo*;" he reigns supreme, hence to get his cooperation, his sovereignty must be recognized. There are many subdivisions into professions, trades, callings, purposes and objects of this great compound unit, society, but none are clothed with authority, commensurate with that of the parent body.

Therefore, when one subdivision enacts rules and regulations, such laws can apply only to the division enacting them, and not to another or the whole, for they have no power to enforce them, which clearly defines the subjects upon which a division may legislate. Any question involving the sovereignty of another must be fixed by diplomacy. If I have not misconstrued plain evidences, it is the violation of these evident truths that has led to trouble with the medical profession.

We are servants and not masters of the people; yet we have undertaken to rule beyond our authority. The result has been antagonism all around. The self-complacent and authority-loving have erected barriers which drive the people from us, and in their wanderings they have met the patent fake and the proprietary charlatan. It seems to me that medical ethics ought to be a very

common-sense arrangement, allowing such departures as may be established to be honorable. The tendency to leave the poor to public charity is not only taking that much from us, but much of other business which pays. We should do it all and induce the public to help in the work, and by so doing regain lost prestige.

We should quit legislating about fees. The public will never cease to sit in judgment upon what they have to pay, and it is right they should. The doctor and the patient in a given case know better how much he is able to pay than any other mortal. The doctor has the services, with all that means, and the other fellow has the pay. They want to exchange. Who will say it doesn't take two to make a bargain?

Let me illustrate this principle in another way. This is an age of combination; soulless corporations are reaching out to control every conceivable source of man's supply. Suppose such power should take hold of the medical profession, avowedly to curtail the number seeking to enter it, and to select from the list certain medicinal agents, these only to be used. Would it avail, thus to close the ranks, and improve its power to force its mandates upon an unwilling people? Let the tokens of disintegration now apparent in most trust companies speak for it. I verily believe the doom of all soulless corporations is at hand; the potential arm of the people is raised to strike. Let us not at this late day incur its displeasure. Rather let us seek that more enduring relation with our fellow-men, which takes him by the hand and in glorious fellowship leads him in the paths of peace, while we grow in the confidence thus built up.

Medical societies are all right, as other trade organizations are right. The field is wide for their usefulness, in elevating the standard of membership, and in ways untold in urging on to higher attainments. But societies, knowledge, force, nothing will ever enable a calling to over-ride the public will, when founded on justice. Therefore, all organizations for control of human action must recognize the right of appeal,

which limits them to the bounds of Truth and Justice. Professional ethics is wholesome and necessary, but if proscriptive and unjust, give cause for appeal and reversal. By these principles, so imperfectly set forth, the true relation of the professions to the great Master they serve is and will be restored, and the autonomy maintained, and every jarring discord eliminated, and merit be rewarded.

As to the matter of which "Incog." complains: "How shall each obtain his share of business?" By the above outlined plan we hope to avoid all obstructing laws and customs, affording equal chance for each and every one to begin that individual effort which must henceforth determine the end. No two will end alike. No advertising trick, or scheme can fill the place where only merit wins.

R. I. McQUIDDY.

Lawrenceburg, Ky.

CATARRH AND NASOPHARYNGEAL AFFECTIONS

We physicians of the two lower counties of this state frequently meet with malarial complications in almost every disease of the human body. If the blood of every inhabitant in Kent and Sussex Counties were examined, I believe that the plasmodia malariae would be found in fully 80 percent. Therefore, it is a natural inference that in diseased conditions in our inhabitants the malarial germ must necessarily play a very important part.

I have found that catarrh of the throat and nose is a very common affection in this part of the country. Naturally, if most of our people have a dormant chronic malaria, were they attacked with any acute catarrhal disease, the dormant malarial germs become instantly an active factor in the disease.

Often where we have cases of acute catarrh of the throat and nose or any of the adjacent mucous surfaces which do not react to the prescribed treatment, both local and constitutional, we may suspect secondary malarial auto-intoxication.

Taking up a few of the generalized symptoms of unresponsive throat affections, I

will begin with the local objective signs. The throat shows an ugly, red, inflamed surface. Reflecting the posterior nares with a hand mirror the mucous surface is seen to be covered with more or less thickened tenacious yellow mucus. There are the general symptoms of what the laity call a "cold."

In malarial complications, where the ordinary local means, though often repeated, fail to produce very much improvement, even after several treatments, it has been my rule, since locating in central Delaware, to suspect malarial complications wherever there is any sign of temperature.

Going back for a moment to two or three general symptoms of chronic malaria which one finds in throat affections, let me first mention the liver involvement. In all malaria, either acute or chronic, a catarrhal jaundice invariably occurs. This to a certain extent shows itself in malarial throat affections by the thickly coated tongue, bilious conjunctivæ and more or less sallow tinge of the skin.

Second. In nearly all malarial affections herpes is present in some form or other. The favorite seat in malarial throat conditions is about the nose.

Third. In a great many chronic malarial conditions there is an enlargement of the lymphatic glands. Where you get enlargement of the cervical glands in catarrhal throat affections it points very strongly to secondary malarial infection.

Fourth. A slight albuminuria invariably occurs in malarial infections; therefore, if the albumin be present in catarrhal throat affections, malaria may be suspected as complicating the trouble.

Fifth. In chronic malarial conditions of long standing hemorrhage from the nose and throat is quite common. Where hemorrhage is produced without any apparent cause, we may suspect malarial complications.

Sixth. The nervous symptoms in chronic malaria are very prominent and neurotic conditions found in conjunction with catarrhal throat trouble may indicate chronic malaria.

It should be borne in mind that every case of throat trouble does not necessarily have

to be of malarial origin, even though complicated by some of the above symptoms; however, where one has a case of any type of throat or nose inflammation that does not react promptly to the prescribed treatment for such conditions, you may look for secondary malarial infection and you will find that the regular antimalarial treatment will usually bring the desired results. It is my practice to give quinine and a colagog in all throat troubles where I do not get results after the first treatment.

Several optimistic physicians claim that the malarial germ is more or less a bogey, but we must bear in mind that our little state is surrounded by marshes on all sides, and that little if any attempt has been made to drain them, therefore we are bound to have more or less malaria in Delaware.

C. J. HARBORDT.

Dover, Del.

[There are some ideas worth investigating in Dr. Harbordt's paper. Many of our readers live in malarial districts and should be able to verify the doctor's findings and give practical points on treatment. It's up to the "family" to comment or to correct. —ED.]

ALBRIGHT'S OFFICE PRACTITIONER

With the December number of *Albright's Office Practitioner* this journal has ceased to appear as a monthly and will be transformed into a quarterly under the name of *The Office Practitioner*. The character and purpose of *The Office Practitioner* will remain the same as its predecessor. We have in the past much enjoyed Dr. Albright's excellent publication, which always was replete with good and useful suggestions. As in the past, it will advise the practitioner how to consider the business side of his calling, a problem all too much neglected, owing to some mistaken idea as to the dignity of the profession that stands too high to be concerned in mere financial matters. Physicians owe a debt of gratitude to Dr. Albright, among other men, for pointing out the error of such notions and for showing

how to conduct an ethical practice successfully from a financial standpoint. We wish the doctor every success in his new program.

HEADACHES AND HOW TO TREAT THEM

While no classification of headaches is entirely satisfactory, it is quite feasible to speak of (1) hyperemic headache, (2) anemic headache, (3) neurasthenic headache, (4) rheumatic headache, (5) syphilitic headache, (6) toxic headache, (7) sympathetic headache, (8) hysterical headache. The last two forms are liable to overlap upon former varieties.

1. In hyperemic headache the pain in the head, resulting from active hyperemia, is accompanied by flushed face, redness of the conjunctivæ, pulsating arteries, especially the carotids, dizziness aggravated upon stooping or bending the head. Alcoholic stimulants, excessive use of tea and coffee, and inordinate sexual excitement may induce it.

2. The passive form of hyperemic headache is easily diagnosed from its usual association with cyanotic discoloration of the face and ears. It is met with in many of the affections in which a partial venous stasis in the head is a marked symptom, as in certain diseases of the heart, or tumors of the neck pressing on the jugular vein. Contraction of the muscles about the clavicle, pressing down and hindering the drainage through the jugulars, is a cause of passive headache. The association of the sympathetic with these headaches is mainly vasomotor. It is at least doubtful whether headache depends upon any vascular changes in the brain itself except in pressure on the nucleus of the fifth cranial nerve. For permanent relief remove the cause.

2. The anemic headache is constantly met with in practice, occurring in loss of blood at parturition, after operation, after profuse diarrhea and with constipation. The characteristic of the pain is a "dragging" in the head, which is of a fairly active nature.

3. Neurasthenic headache is difficult of classification since it, in so many ways, resembles the passive form of the hyperemic headache. Long-continued brain work, especially if monotonous anxiety, depressing emotions and all causes of nervous debility conduce to this form of headache.

4. The rheumatic headache is met with after chilling the skin, after sweating on the scalp or nape of neck. It may occur under various conditions which produce a chill. The headache of gouty people is of this form and is usually frontal and associated with vertigo.

5. The syphilitic headache may be a warning of brain affection. In secondary syphilis it may mean periosteal affection of the skull-cap. It may exist without any coarse lesion and be accompanied by some swelling of the cervical glands. The one invariable symptom of this type of headache is its greatest intensity at night. The intervals of attack usually become smaller and smaller, day and night, and it may sometimes lead even to delirium and mania if neglected.

6. The toxic headache is usually due to the absorption of some toxins in the circulation, e. g., such as are developed in constipation. Some patients suffer from headache due to alcohol, chloroform, carbonic oxide or sulphureted-hydrogen intoxication, or even to the poisonous effects of lead and sometimes opiates. Toxic headache is usually a symptom of uremia.

7. The sympathetic headache depends entirely on a morbid condition of the vasomotors of the membranes due to an excitability or a paresis of some vasomotor center, but is usually due to some reflex action.

8. The hysterical headache can often hardly be separated from the sympathetic. It is frequently intense and very real. It may be hyperemic, or anemic, or be set up by reflex irritation, or it may be symptomatic of brain-starvation from insufficiency of brain-food either in quality or quantity. It is sometimes associated with photophobia, tinnitus and vertigo. It is unquestionably a neurosis depending on abnormal conditions

of the arteries and sometimes it is accompanied by neuralgia of the trigeminal nerve.

J. E. WATSON.

Chicago, Ill.

[This classification is a very interesting one. It should, however, be supplemented by an article—or several—on the treatment of the various forms. In acute congestive headache, for instance, the patient should receive a quickly acting saline purge, aconitine or gelseminine if the pulse is of high tension, and cicutine or the bromides to relieve the hyperemia. For passive congestion keep the bowels clear with saline cathartics, equalize circulation with digitalin, or digitalin plus dosimetric trinity, possibly stiffening tension with small doses of ergotin or strychnine arsenate. Anemic headaches are benefited by iron and arsenic (as in arsenates of iron, quinine and strychnine, with nuclein), generous diet, care of the intestinal canal, never forgetting removal of the cause. Neurasthenic headaches are often due to alimentary absorption and are lessened (and sometimes cured) when the patients have learned the lesson of "clean-out-clean-up-and-keep-clean." And so we might continue—but we want to persuade our readers to do that. Who will volunteer with a short article on "The Cure of Headache?" We all know enough to give an acetanilid mixture to *relieve*. We should know more!—ED.]

LOOK OUT FOR THE COLLAR BUTTON

One half an hour ago I finished reading your editorial on the collar button. Twenty minutes after reading it Mrs. E. comes screaming that her child, eighteen months old, had swallowed an iron screw used for woodwork.

She lives only one and one-half squares from the office. I responded at once and arrived in possibly two minutes, just as the child gasped its last breath. So you can see there are other things that are dangerous besides collar buttons.

I passed my finger to the larynx and found the screw in the larynx with the head above.

It was firmly grasped by the spasmodic action of the larynx and could not be removed without cutting to which the parents objected, inasmuch as the child had expired.

CHAS. J. HEMMINGER.

Rockford, Pa.

[These sad experiences come to all of us. They are all the more sad when we are powerless to help, as in this case.—ED.]

CALCIUM SULPHIDE IN DIPHTHERIA

Among the many reports of the present treatment for diphtheria I thought it might be interesting to give a short history of my experience in the treatment of diphtheria for the last thirty-five years, showing the value in my hands of antiseptic treatment. In the winter of 1873-1874, in Grass Valley, Nevada Co., we had an epidemic of diphtheria which proved to be severe because in about twenty cases there was not one recovery.

The cases assumed a virulent form from the very start. Many of the cases had the postnasal parts affected, sometimes the conjunctiva was coated, and in a few instances the region around the anus. All had active delirium after the first day or two and in their delirium would injure their hands and arms, and all such places became coated with the diphtheritic membrane. Death usually resulted in a few days. I happened to have most of the cases, and as I had never seen a case of diphtheria before, I was discouraged and begged the people to get the older physicians; but it was all the same, since all the patients died.

The authorities we had in those days were Watson-Condrie on "Diseases of Children," Wood's "Practice," in two volumes, and several medical journals, and the principal treatment consisted in local applications to the throat, spraying of the nose, the administration of quinine and brandy and iron to sustain the patient. Result, all died.

This set me to thinking, and I made up my mind that in the next case of diphtheria

I had I should saturate the patient with some kind of an antiseptic.

In May of 1874 I removed to Virginia City, Nevada, where the sewage of the city ran in an open flume under the sidewalk, and many times the odor was so unpleasant that people had to take the middle of the street. The consequence was that we had diphtheria all the time. About that time Ziemssen's "Practice," a German work, appeared, and among other good things in it was an application for the throat of a mixture as follows; chloral hydrate, one dram; glycerin, one ounce. To this I added concentrated carbolic-acid solution, from fifteen to twenty minims, depending upon the age of the child, and applied it to the throat every one or two hours. Children under five or six always swallow any solution and they get enough carbolic acid to make it appear in the urine. To older patients I gave carbolic acid enough to get the odor in the urine as soon as possible and held it at that until the disease was under control.

I wish to illustrate by an epidemic which appeared in the fall of 1874 that there were no mild cases. About October, 1874, an epidemic of diphtheria broke out in Smith's Valley, 160 miles away from Virginia City, and my brother, Dr. Peter Manson, who then resided in Gold Hill, a suburb of Virginia City, was called and took a plentiful supply of supplies with him, getting there as quick as horseflesh could make the trip.

When he arrived, there were twenty-one out of a total of thirty-two children dead from diphtheria and the other eleven down with the disease. One died the next night and he saved the other ten.

In 1880 I removed from Virginia City to North Bloomfield, Nevada County, a high ridge, and had a good many cases of diphtheria every winter, but had no trouble with them.

I still follow the antiseptic treatment, and for the last ten years I have been using the calcium sulphide and find it all right. Four years ago we had a small epidemic here in Lincoln and the disease went through whole families and three deaths occurred. I had

a good many of the cases and by saturating the families with calcium sulphide I kept the disease from spreading and my patients made a quick and complete recovery. Of course I gave them 1000 units of serum as a precautionary measure, but I have never exceeded 2000 units, while I have heard of other physicians here giving 10,000 units and still having trouble. One advantage of the calcium sulphide is that it is indicated in any stage of the disease, whereas the serum is recognized to be worthless after the fourth or fifth day.

I hope, Doctor, I have not exhausted your patience with the long letter but I got so enthusiastic over calcium sulphide that I just had to have an outburst.

JOHN MANSON.

Lincoln, Placer Co., Calif.

[The reason why calcium sulphide does such good work in diphtheria is that it is one of the best antiseptics which we can give internally, while in diphtheria the organism becomes intoxicated or septic more rapidly than in almost any other acute infectious disease. Thus the indication which stands out foremost is fully met.

I congratulate you on your fine results, Doctor. I well remember what a bugbear this terrible disease used to be, and how my heart would sink when called to a case. Now we are no longer afraid of it.

The antitoxic serum fills an important place in our armamentarium, but as you say, it must be given early. Stick to your calcium sulphide, however, Doctor.—ED.]

AN EIGHTEEN-POUND BABY

In reply to Dr. Carrington of New York City, who says in your November number there are no seventeen-pound children, I will say, "Off again, Dr. Carrington, and I will go you one and three-fourths pounds better."

Just about eleven years ago I was called in consultation to Mrs. Peter Laur, a midwife, in Spring Valley, Ill., to attend Mrs. Papke, mother of the middle-weight prize fighter. The midwife had been in at-

tendance about thirty-six hours and realized that it was an instrumental case.

The history of the case is very interesting and I should have published it years ago but feared that the medical skeptics, not having like experience, would think me a liar; but now I am older and don't pay any attention to what others think.

History: Fourteen months before the date of Mrs. Papke's confinement I attended Mrs. Jest, her neighbor, and Mrs. Papke acted as nurse.

While waiting Mrs. Papke stated that she would be next, and asked me to examine her; this I did in the presence of Mrs. Jest and found that Mrs. Papke was four months in gestation. This my books show to have been *fourteen months before her delivery*.

Mrs. Laur, the midwife, says that she was engaged to attend Mrs. Papke over a year before, that she saw her every week and knew that the baby had been carried not less than 18 months. Mrs. Jest stated that she had agreed to nurse Mrs. Papke in return for a like favor. She lived one block away, saw Mrs. Papke almost daily, and said Mrs. Papke did not miscarry and that she knew that the patient had carried the baby ever since I had examined her fourteen months before. Mrs. Papke said she had carried the baby all the time since I examined her at Mrs. Jest's, fourteen months before, and "you told me that I was four months along then." Mr. Papke said the women had told the truth.

Delivery: As the head had been presenting for many hours I applied the short forceps and delivered down to the ears, and then got stuck; it required nearly an hour to extend the chin and deliver the face. As soon as the face was born the child opened its eyes and cried. Of course I made pressure on the perineum so that it could breathe.

I made strong traction on the head many times and could not deliver. I took away the chloroform and had the mother exert herself while I made traction. I made attempts to use the shoulder-hook many times, but every time I did so the child became

asphyxiated. Finally, after two hours' failure, I determined to hook a shoulder and bring it down if there was a shoulder. I at last succeeded in bringing down a shoulder, which caused the child to stop breathing. I as rapidly as I could hooked the other shoulder, and as I pulled it down I felt the child struggle and it died while the chest and second shoulder were coming through. It was not all over yet. I was obliged to wrap a roller towel around the child and use all my strength to deliver the hips, which were stuck.

Now, Dr. Carrington, I am aware that it upsets the decisions of the courts and sounds "fishy," but if you are in doubt write to any of the Papkes—Ed., Bill, the fighter, or to Mrs. Papke, at Spring Valley, Illinois. The child was 27 1-2 inches tall, 17 1-2 inches around the waist, 10 1-2 inches across the shoulders and it *did weigh* 18 3-4 pounds, *nude*; and was a female. My scales were tested and found to be correct. My daughter, aged eight months at the time, measured and weighed the same. There are larger children that have lived and have been reported upon, one I believe in the state of New York, the other in Mississippi or Louisiana, that weighed nineteen pounds, and lived. I believe they were reported in *The Medical World* about seven or eight years ago, or in *The New York Medical Journal*. When you absorb that I will write you again.

M. H. EVANS.

Joplin, Mo.

[While the recorded weight of your baby, although highly unusual, has been surpassed, inasmuch as according to Dr. Edward P. Davis ("A Treatise of Obstetrics," second edition, 1904, page 679) "children have been born weighing as much as twenty-two pounds," the duration of gestation in your patient, if correct, is longer than any that we can find recorded. Dr. Davis gives three hundred days as the longest period of pregnancy, and this is the time-limit established by the French law for legitimacy of the offspring, that is, a baby born, say, over three hundred days after the death of the

husband of the mother is not considered legitimate.

All the textbooks on obstetrics which we have consulted give the same time-limit. Dr. J. Clifton Edgar ("The Practice of Obstetrics," 1906, page 145), who writes on this subject at greater length than any other American author (except possibly Lusk), cites a number of cases of protracted gestation, from literature in which 317 days was the longest period observed, and "this limit of 317 days is, according to most medical authorities on the subject, an extreme one." If we accept the same authority regarding what is called "missed labor" (*ibid.*, page 369) we cannot call your case such, because in missed labor the fetus always dies, and your baby was alive when the head was delivered.

Witthaus and Becker ("Medical Jurisprudence," second edition, Vol. 2, page 514 seq.) likewise cite a considerable number of similar cases. The longest periods of gestation which we can find cited were reported as follows: Schlichting (*Arch. f. Gyn.*, xvi; 1880; page 203); case of pregnancy which lasted 334 days. Jaffé (*Centralbl. f. Gyn.* xiv; 1890; page 74); multipara, aged 31. Labor occurred 365 days after last menstruation. Jefferis (*Trans. Med. Soc. Pa., Phila.*; 1879, xii; page 759); a case of prolonged gestation; 358 days from the cessation of the menses to the delivery of the child. And many others.

Now, Doctor, I write a rather long comment on your case, because the case is itself an unusual one. But you will readily understand that it is not yet fully established (at least not so that a jury of physicians would admit its validity) without further information. At the same time, if the case can be proved, it would be well to do so, because of its extreme nature. You would have to establish, among other points, when the mother, Mrs. Papke, menstruated last; whether she felt life at the usual time, which would be about two weeks after you had first examined her; whether she had felt any labor-pains at term, which then disappeared; if possible, how frequently during that particular pregnancy she had sexual

intercourse. Her age, and the number of children born before that pregnancy would be of interest, as also the period of gestation in the preceding and later pregnancies. Then you would have to find out any other facts which may possibly have a bearing on the elucidation of the case. If you care to take all this trouble (and I wish you would) we shall be very glad to do all in our power to assist you to report the case to an obstetrical society or journal, where it properly belongs.—ED.]

[HONORS TO DR. TALBOT

We have just learned that Dr. Eugene S. Talbot, the well-known dentist-physician and authority on the problem of degeneracy, has been elected to corresponding membership in the Budapest Royal Society of Physicians, the oldest scientific organization of its kind in Hungary. This honor is given as an evidence of the great esteem felt for the doctor by this body because of his well-known scientific work, these feelings being rendered more forcible on account of his activity on the occasion of the meeting of the International Medical Congress at Budapest last fall. We extend our congratulations to Dr. Talbot for this well-earned honor.

ALCOHOLIC "BILIOUSNESS": ITS TREATMENT

Out here in Nevada, where alcoholic beverages are consumed to a considerable extent, numerous cases of so-called "biliousness" come to the attention of every practitioner.

In cases of this kind we find our patient, as a rule, with a dirty tongue, foul breath, headaches (sometimes frontal, sometimes occipital), a tendency to and as a rule more or less vertigo. Almost invariably we find the bowels sluggish, often constipated to a considerable degree, and with the general symptoms of autoinfection. Some cases show an abnormal temperature, the thermometer reading one or two degrees above normal. In all such cases there is a

loss of appetite and a general feeling of lassitude.

When such a case presents itself to me, I first administer calomel and podophyllin, of each 0.06 Gram every ten or fifteen minutes until 0.12 Gram (grs. 2) of each have been taken. At the expiration of from two to six hours this is followed by heaping-teaspoonful doses of saline laxative (effervescent magnesium sulphate) at half-hourly intervals until there are one or more copious watery evacuations of the bowels.

Having thus increased the action of the liver and cleaned out the bowel, I then follow with intestinal antiseptic of the three sulphocarbolates, 10-grain doses every two hours for forty-eight hours, and then two or three times a day until such time as the indications are to the contrary. When fever is present, I administer the dosimetric trinity to effect, after first cleaning the bowels, and provided this latter procedure does not bring the temperature to normal, as frequently happens in such cases. If there is a tendency to continued sluggishness of the liver and atony of the bowels, I give $\frac{1}{2}$ grain each of podophyllin and juglandin before meals and a laxative dose of saline laxative each morning on rising.

It should not be necessary to state that alcohol is withheld in all such cases. If the patient is a habitual drinker and I find him suffering because of its withdrawal, I add to the treatment strychnine nitrate in full doses as may be required. Where such necessity does rise, then, instead of the dosimetric trinity, I employ aconitine alone as a febrifuge.

Numerous cases of this sort have come under my care, and it has been my experience that as soon as the liver is toned up and made to act and the bowels are cleaned out and kept clean, there is an invariable abatement of the symptoms and that within a very short while the patient regains his appetite, loses that "tired feeling," has no headache, and invariably declares that he "feels like a new man." I have never tried emetine in such cases, but believe that a grain dose on retiring would work wonders, by hastening elimination of the toxic ma-

terials. But the method I have employed works well.

GEORGE L. SERVOS.

Fairview, Nev.

BACK NUMBER OF CLINICAL MEDICINE WANTED

Can any readers supply us with copies of the July, 1909, number of CLINICAL MEDICINE? Several of our subscribers are very anxious to secure this issue and we, of course, want to accommodate them. If you have an extra copy send it along without waiting to correspond with us, but at the same time drop us a line so we may know from whom it comes. Will you do this, Brother?

VERATRINE IN PUERPERAL CON- VULSIONS

Feb. 20. 1909. The patient was a young lady, about 18 years old, of neurotic temperament. She had had enuresis from childhood, and was said to have had hysterical fits some two years ago. Otherwise her health was good, although her constitution was weak. The patient was treated, four months ago, for enuresis, which disappeared, under strychnine and atropine, and intestinal antiseptics, within one month.

I was sent for at 5 p. m. with a message that the lady had been in labor since morning. On my arrival, I was told that she had had a fit, which lasted a few seconds only. The nurse in attendance told me that the os was well dilated and the child was low down with head-presentation. The perineum was rather too rigid. An emena had been given and the urine had already been drawn off by the nurse. There was no fever, and the case was progressing fairly. On account of the Parda System I could not examine the patient personally and I was obliged to depend on the nurse's report.

Upon close inquiry, I could make out that the enuresis had returned some two months ago, but it was of a very mild nature. A fresh specimen of urine could not be secured owing to the advanced state

of the labor. I watched the case for an hour but there was no return of convulsions and the labor was progressing fairly. Consequently I attributed the fit to hysteria, and as I had to see another case, I left, leaving my address with the friends of the patient. In about three-fourths of an hour I was called again to see the patient. She was in very severe convulsions, with frothing at the mouth. She was quite unconscious. The fit lasted for about four minutes.

From her condition I could at once make out that it was a case of puerperal convulsions. I prescribed veratrine (1-134 grain) granules at once—one every five minutes till four doses were taken and then every one-half to two hours, according to the urgency of the symptoms. I desired to give a copious enema of warm water, but it was not practicable. In spite of the administration of veratrine, the case grew worse. So I advised an immediate evacuation of the uterus.

As I was very weak at that time, on account of a recent occurrence of a carbuncle in my loins, I sent for a brother practitioner for the purpose. He agreed with me, applied forceps and delivered the case. Upon evacuation of the uterine cavity the lady regained consciousness to a fair degree and the convulsions were much less severe. During the operation her perineum was torn; but it remained unnoticed at the time. The nurse, however, informed us within half an hour that the perineum was torn.

We decided to stitch the rent immediately. I advised the brother practitioner to stitch the rent under chloroform; but he declined and stitched it without the aid of any anesthesia. This painful procedure put the lady again into severe convulsions with frothing at the mouth and unconsciousness. Veratrine, glonoin and gelseminine were left with the nurse. An enema of warm water was ordered to be given. The forceps operation was performed at 11:30 p. m. The stitching was done at about 1:30 a. m. I wished to administer veratrine hypodermically, but unfortunately my syringe had gone out of order and could not be

easily repaired, and I regret to say that I could not procure another one from my brother practitioners. I went home and repaired my syringe.

I was called again in the morning and I found the patient in the same condition. On inquiry how many doses of the medicine had been taken I found, to my surprise, that none had been given. Not only that but the veratrine granules that I had prescribed the previous evening had also not been administered with the exception of only two granules.

I felt the pulse and found it hard and bounding so I dissolved one granule of veratrine in my badly repaired hypodermic syringe and gave an injection. Only half the quantity of the solution could be introduced under the skin of the left arm. Within five minutes I could mark a distinct change. Being encouraged by this result I dissolved two more granules of veratrine and administered the solution hypodermically. Within half an hour the convulsions had almost ceased and the patient could swallow liquid nourishment for the first time; but was still unconscious. I left the case on veratrine, gelseminine, glonoin, with intestinal antiseptic, advising to give small frequent doses of water and to sponge the skin with warm water several times with friction.

In the evening I saw the patient again and I found that she was progressing fairly well. She was still unconscious, but could now swallow medicines and nourishment freely and could understand something. However, the friends thought it better to put the case under the regular allopathic system of treatment and it passed out of my hands. Upon further inquiry I came to know that the patient had developed mania (hysterical?), in which condition she remained for about two months and now she is practically all right.

SHANKER CONOJIE.

Malvan, Dt. Ratnageri, India.

[This case illustrates several things, one of the most important being that if you want to be sure that a thing is well done you must do it yourself. Especially is this true in the

treatment of such a terrible condition as puerperal eclampsia, which often requires every resource of the doctor's mind, as well as an intimate knowledge of the action of his remedies. That man is most certain of results who *personally* administers the drugs required himself, watching their action, increasing or diminishing the doses until the end sought for is reached. I am sure that the next time the Doctor is called to a case of this kind he will trust not at all to the native nurse, unless he *knows* that he has one that can be trusted—absolutely.

A worn-out, leaky syringe is an abomination! This is an emergency instrument, required nearly every day, and simply *must* be right. Every doctor should have two or three, and all of them should be in perfect working order.

When the veratrine finally did get a chance to show what it could do it proved effective. As our French brethren say, it is a "precious" remedy in the treatment of puerperal convulsions.

Next time, Doctor, tell us what the "Par-da System" is.—ED.]

HATPIN SWALLOWED BY A PUPPY

As some of the doctors report curious happenings in their practice, I will also tell of a case that came under my observation a few days ago.

Mr. R. brought to my office, on January 11, 1910, a 3-months old terrier pup, that, he said, had swallowed an ordinary ladies' hatpin. The little fellow seemed to be in great misery, and examination revealed the head of the pin low down in the left flank. Under chloroform anesthesia, after shaving the field of operation, I made an incision in the flank, hooked up the head of the pin, and found it to be in the big gut, it having forced its way through the stomach and small intestine. Incising the gut, I extracted the pin, which measured 8 5-8 inches in length. I sutured the opening in the gut with five silk sutures, closed the peritoneum and skin wound, withheld solid food for forty-eight hours, and the pup made a quick and uneventful recovery.

Now, I am not reporting this because there is anything miraculous about the operation, but because I never heard of anything just like it, and, further, because the dog measured only 10 inches from ears to tail, while the pin was 8 5-8 inches in length. I could not feel the point of the pin in the throat. The pin was a little crooked about 3 inches from the point.

S. D. MOTLEY.

Hollins, Ala.

[Doctor, that was a mighty long pin sticking in a mighty little dog! Even if the patient was a dog, the report nevertheless is interesting. I think, though, I should have put him under the hyoscine-morphine-cactin combination for the operation. Dogs will stand any amount of it safely, so our veterinarian tells me, and you would not run any risk of losing the animal, which was evidently a pet and valuable.—ED.]

A NEW TEST FOR BLOOD IN THE URINE

Albarran and Heitz-Boyer (*Gazette Medicale de Paris*, Aug., 1909,) describe a very simple and exceedingly sensitive test for blood in the urine. The reagent required is made up as follows: 2 Grams of phenolphthalein and 20 Grams of potassium hydrate are dissolved in 100 Cc. of boiling water and there is then added 10 Grams of powdered zinc. The color of the solution is at first red, but the color gradually fades out. As soon as it is completely decolorized the fluid is filtered while still boiling.

To carry out the test, two cubic centimeters of urine are shaken up in a test-tube with one cubic centimeter of the reagent and then 3 or 4 drops of a 12-volume hydrogen-peroxide solution are added. In the presence of blood the solution assumes, in the course of a few seconds to two or three minutes, a fuchsin-red color, the intensity of which varies with the proportion of blood present. With this test it is said that blood in the dilution of 1 : 100,000 may be demonstrated.

We have had this test controlled in our laboratory, and it was found to be extremely

delicate. It was also found of value for the detection of blood in fluids other than urine; also in stains. A positive reaction was obtained even if the blood was in putrid solutions, in tissue stains, etc. Our pathologist offers the advice that the reagent be kept in the dark and protected from air.

The importance of the test will readily be evident to the practitioner, especially for the detection of blood in the urine. The method is simple, once the reagent is prepared, and lesions of the kidneys, for which the detection of blood in the urine is of great importance, may thus easily be diagnosed when other methods are not available to the practitioner because too complicated.

NEW REMEDY FOR BAD COLDS

Did you ever try aborting and curing a "bad cold," by local applications to the anterior nares? Most doctors have, no doubt, by insufflations of powders or liquids, but I venture to say no one ever thought of tincture of myrrh in this connection.

The anterior nares are probably the birthplace of bad colds of all sorts, for the reason that it is the first sensitive point touched by the germ inhaled. If it effects a lodgment there, it will be heard from within three days through all the symptoms usually following this form of infection, i. e., sneezing, profuse ichorous discharge from the schneiderian membrane, wetting six to twelve big linen handkerchiefs in a day, chilly sensations, muscular rheumatism, and other indications of checked or suspended cutaneous elimination; later sore throat, swollen tonsils, cough, pain in the chest, etc.

From this breeding-ground in the nares the little beasts are drawn down the throat and into the bronchial tubes, from whence they reach the blood. If we catch them before they leave their breeding-grounds, the cold will rarely if ever reach the second stage. Various substances employed for this purpose destroy them, but this will afford only temporary relief—like killing all the flies in a room and leaving the windows and doors open. In order to propagate and multiply, the germs require moisture and

the more profuse the secretion, the more rapidly they multiply.

The logical remedy is something that will form an impervious coating over the birth-chamber and thus cut off their supply of moisture, and the best thing for this purpose, the best because harmless and perfectly effective, is tincture of myrrh. With the feather end of a pen-holder wrapped with absorbent cotton dipped in the tincture (undiluted) swab out the anterior nares, and plug them lightly with dry cotton. Repeat this every hour or so until the living membrane is so completely coated with gum myrrh that it feels as dry as a bone to the patient, and take care to keep it in that condition.

Unless systemic infection has already been effected, your cold will get well of itself. The effect on the anterior membranes seems to be transmitted all along the superior air passages. If infection has passed beyond the first stage, as evidenced by dry skin, increasing urinary secretion, pains and soreness of the muscles, cough, headache, etc., administer the local treatment precisely as if this had not happened, direct the patient to keep the bowels open with small, frequently repeated doses of epsom salt, and administer some of the numerous mixtures for coughs and colds, it does not matter much which, so long as it contains the three following: creosote, terpin hydrate and heroin. These should be pushed once in three hours, in doses large enough to start the emunctory action of the sebaceous follicles of the skin.

You will thus head off many a fatal case of pneumonia, many a miserable case of quinsy, sore throat, tonsillitis, bronchitis, etc. We don't "catch" these things by exposure to wet and cold; but we do catch a "bad cold"—no body ever caught a good one—and the cold prepares the soil for the reception and cultivation of the first one of these germs that reaches it.

T. W. WILLIAMS.

Milwaukee, Wis.

[Dr. Williams suggestions for local medication, to prevent the "spread" of colds, are

certainly as suggestive and should be as useful as they are novel. Candidly I do not like the idea of giving the same internal medication to all—though the remedies suggested are of undoubted value for the disinfection of the respiratory tract, and to relieve excessive irritation. In my opinion it is of primal importance that during the febrile stage the circulatory disturbance be adjusted—and that calls for aconitine supplemented by atropine; while I like some iodine-bearing remedy, since iodine seems to have a specific influence upon the mucous membrane of this portion of the body. However, Dr. Williams suggestions are fine.—ED.]

"THE DYING"

The friends of the late lamented Prof. Hermann Nothnagel of Vienna have published a second edition of the lecture he delivered, in 1900, on "Dying" (*"Das Sterben"*)*. The pamphlet is embellished with a representation of Nothnagel's monument.

This monument is an unusually profound symbolic piece of art. It represents a large irregular natural rock tending at one end to reach a pyramidal point. The rock is located close to a large stone wall. By the side of the rock stands a full-grown young man wrapped in a flowing sheet down to his feet. His left shoulder and upper arm are covered with a tunic sleeve; the rest of the limb is bare and the hand holds an opening scroll. The right hand holds a laurel wreath which he is laying down on a natural shelving of the rock, and above the shelving on the face of the monument are these words: "*Nur Ein Guter Mensch Kann Ein Guter Arzt Sein*" ("Only a good man can be a good physician").

The pamphlet contains also a fine picture of the noble features of Professor Nothnagel as well as a facsimile of the notes which he wrote a few hours before his death, describing his condition and symptoms.

The book costs only two *kronen*, something less than fifty cents. I read this

lecture with absorbing interest and from it I translate the concluding passages:

"We come to the close. Gathered in a few sentences, founded on what experience and observation have given us, our last words are these: The shuddering ideas which fancy has woven about the physical dying exist for the most part in the imagination only. Really horrible is dying in a few cases only, and the horror is produced by man upon his fellow-man, in death by fire and torture. Nature, however, is mostly more merciful than man, and were she alone, and always, allowed to prevail and were human beings to reach the natural end of their existence, then surely should we think of dying as the weary one thinks of sleep, and we should long for the sweet comforter and restorer.

"Almost always, where nature causes death, she mercifully spreads a veil around her trembling creature, hiding the anguish and horror. Not physical dying is full of torture; full of torture is the soul's death anguish. And this last? A highly revered friend often expressed his wish to be allowed to part from life with full and clear consciousness, and so strong was that wish that he took the binding promise from his old physician (and it was he who related it to me) certainly to disclose to him when according to human insight his end was about to come. The man suffered from calcification of the coronary artery of the heart and the severe paroxysms of pain this entails. During such a paroxysm his physician said to him: 'It is presumably coming near.' Then he called his family together and with them alone, the world being dismissed, he passed a few days more with a cheerful, restful, reconciled soul, peacefully awaiting the end—an exalted example of a clarified humanity.

"To be sure this one was a man to whom Goethe in his youth applied personally the word: 'No one goes away from him without a sense of having been made better.' And when the surviving great ideal form of the bygone golden days of Weimar-Jena became a gray old man, of him too the same could be said. 'No one goes away from

*"Das Sterben." By Hermann Nothnagel. Verlag von Moritz Perles, Vienna.

him without a sense of having been made better.'

"Why does it press me to remember this illustrious one here? Because his dignified example teaches how a wise and good man thinks about death. True it is that but few agonize to reach up to this height of the spirit. 'To but few hearts,' to use a Socratic expression, 'speaks the good daimon so loud that they hear nothing but the sound of his voice and forget dying and death because of it.' But these few are free from the terror proper to dying, namely the soul's death anguish. They are able, like Socrates when the cup with poison was given him to drink, to say: 'Well, then, Kriton! Good Luck! If the Gods would have it thus, then be it so!'"

E. M. EPSTEIN.

Chicago, Ill.

PREGNANCY IN OLD AGE

Dr. B. F. Archer of Sweetwater, Texas, says, in a personal communication that he has an interesting case on hand of pregnancy 5 years after the climacteric had been established, and asks us for reports of similar cases. In *CLINICAL MEDICINE* for 1908, page 1074, a case was quoted by Dr. Zwigtman from the *Journal de Médecine de Paris*, No. 26, 1881, in which a woman became pregnant after she was 70. Also, in *Genesis*, chapter 17, verse 17, there is a report of pregnancy in a woman 90 years old. The literature on the subject is naturally meager, and we shall appreciate reports of cases which are well authenticated. If you know of any, please give the details as accurately as possible, so that they can be used for a little communication on the subject which we are planning to get up.

THERAPEUTIC NOTES FROM EUROPE

Ernest Barie of the Laennec Hospital, Paris, counsels the use of silver in colloidal form, such as collargol, electrargol.—*Journal des Practiciens*.

In the impetiginous form of nephritis in infancy, says Hutinel, digitalin is useless.

Rest in bed and laxatives are indicated, to which may be joined hypodermics of oil of camphor.—*Journal des Practiciens*.

Fresh cheese, such as Swiss cheese, may be given to babies soon after weaning, according to Dr. Comby, of Paris. Baked cheeses, because they require mastication, are excellent, according to the same author.

Readers of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* will be interested to hear, from France, that Robin is not the therapeutic nihilist of common type where pneumonia is concerned, but as recently advised in this journal, begins with calomel. Then he gives quinine bichlorhydrate; then the white oxide of antimony and aconite; then tartrate of antimony. Robin compares his mortality in cases of pneumonia with the Paris Hospital records, being as 13 percent to 29 percent in his favor. [If he used the dosimetric method he would reduce his mortality much more. The antimony salts are very depressing and he gives no supportive medication, such as digitalin and strychnine arsenate.—ED.]

Albert Weil doubts the advices which have emphasized electric introduction of ions of medical agencies into the body. He recites the studies upon salicylic acid, lithium, magnesium and zinc, and denies that their subsequent recovery from the urine means much. The ions may have reached the corium and then been swept directly to the kidneys without medicinally influencing the patient.—*Journal des Practiciens*.

Inhalations of amyl nitrite are indicated in hemoptysis, Pic and Petitjeau say, in the *Lyon Medical*. This is endorsed editorially by the *Journal des Practiciens*. [For the same reason exactly glonoin, followed and supported by atropine, is ideal treatment in hemorrhage.—ED.]

Diarrhea of intestinal insufficiency as in pancreatic or liver disease requires opotherapy, and Carnot orders extract of bile and pancreatin.—*La Tribune Médicale*.

Marmorek's antituberculous serum acts favorably, Monod reports. The medical cases give 65 percent showing improvement, and surgical cases 72 percent.—*La Tribune Médicale*.

Injections of morphine relieve laryngeal stenosis, according to reports of Sargnon and Rome.—*Journal des Practiciens*.

Pastiles of emetine are recommended by Liegeois. Emetine was first recovered from ipecacuanha in 1817 by Magendie.—*Journal des Practiciens*.

Morphine hydrochloride and the alcoholic extract of aconite root [aconitine better] are valuable for the bronchorrhea of phthisis, says Liegeois, in *Journal des Practiciens*.

Once the diagnosis of acute syphilitic meningitis is established, push mercury. The coexistence of distinct eruption will point to secondary manifestations. The tertiary variety may be differentiated by its eruptions of localization. After the acute stage passes, chronic meningitis *en plaque* usually continues and this form, acute and chronic, must not be confused with cases of paresis. In the acute stage, cephalorachidian lymphocytosis may transform itself into a polynuclear multiplication. Push iodides.—*Journal des Practiciens*.

Hayem differs from Manquet in preferring the drug ipecacuanha to emetine, although he admits the former is not constant in composition.—*Journal des Practiciens*.

"Each pregnancy costs the mother a tooth," quotes Emile Ely. He advises systematic employment of alkaline mouth washes.—*Journal des Practiciens*.

Brocq prescribes an ointment of calomel, oxide of zinc, lanolin and vaseline to assist in the convalescent stage of facial impetigo.—*Le Progres Medical*.

The endodermal tuberculin reaction is unfavorably considered by Laignet Lavastine, who says that its diagnostic value is obscured on account of negative results in early pulmonary trouble, and positive results in apparently normal subjects. (I know from autopsy that slight tuberculous foci may exist and undergo spontaneous healing. The tuberculin test may coincide with activity of one of these).—*Journal des Practiciens*.

Tetanus is well treated by endorachidian injections of a solution of sulphate of magnesium (epsom salt). In addition J. Tanton

employs antitetanic serum.—*Le Progres Medical*.

Amyl valerianate in etherial solution is advised editorially, by *Le Progres Medical*, for the pseudoangina of the thorax in neuropaths.

Aristol, tannin, antipyrin and magnesium salicylate are combined for dressing cancerous ulcers.—*Le Progres Medical*.

Those who see in psoriasis an evidence of hereditary syphilis, according to Sweg, value the use of Donovan-Ferrari solution, iodide of arsenic, in its treatment.—*Le Progres Medical*.

T. H. EVANS.

Freeport, N. Y.

WANTED: COPIES OF THE OCTOBER CLINIC

We have completely exhausted our supply of copies of the October, 1909, **CLINICAL MEDICINE**. If any of our readers have copies to spare we shall appreciate it if they will return them to us. We need a few to fill the rapidly incoming flood of new subscriptions, many of which commence with preceding issues.

THE DOCTOR AND MIND-HEALING

I notice what you have to say in your review in **CLINICAL MEDICINE** for December (1909, p. 1295). What will you do? All of those writings will do good.

When writing my book, "The Errors of Mind-Healing," the thought entered my mind, "Get out a cheap pamphlet so it will be generally distributed." But on second thought, after reminding myself of the many such pamphlets that had been written, the sermons preached and lectures delivered, without accomplishing much for want of a complete and convenient "Treatise," to which to refer, the idea of a pamphlet seemed not to fill the bill for a permanent work.

While writing the last part of my book a friend tried to discourage me by referring to the McClure exposures, stating that there was no room for any other book now. McClure's magazines, with few exceptions,

were read, laid aside for a few months, and then, like other journals and pamphlets, they were destroyed.

Now, what I mean to say is this: When a great and strenuous effort has been made by one of those among whom the real interest should center, and when he has brought out a work that will not only expose and refute one cult and false teacher but all of them and that in reality is a textbook on the subject in a form that will last for time to come and a work which has the support of our collaborators, the ministers (at least the great majority), it seems that not only the doctors should support it, but more especially the medical journals.

This book, which has been published in 1909, does not only deal with faith-healing, but it points the way to the laity, when in need of medical advice, to consult an honest physician. So far as the cost is concerned I shall be glad to sell the books now to those who wish to distribute them, at the very low price of 60 cents, freight prepaid, in lots of not less than ten. In large lots I shall sell them still cheaper, at least later on. I am preparing to revise and perfect the book, and in a short time it will appear with 20 or 30 pages more and with the addition of a few very interesting points.

What we need is a united front, and if the doctor will lead, the clergy and others will do their part.

R. WILLMAN.

St. Joseph, Mo.

[Dr. Willman is finding out that of all people physicians are least grateful for the efforts of those who fight for the welfare of the profession. It was ever thus, and will so remain until doctors wake up to their own interests, ceasing to be satisfied with the mere drudgery of practice and begin to see the greater importance of their calling and the proper meaning of their title, which is "teacher." Doctors should not only treat and heal the sick, but an even greater part of their duties consists in teaching their clients how to avoid getting sick.

The present craze of chasing all possible fads is merely a phase in the general mental unrest and dissatisfaction. The fads concern

not only matters medical, but also matters religious, and the clergy complain bitterly of the diminished interest in religion shown by the educated.

The remedy? Work and wait. We can only, each one in his sphere, do our duty as much as is in us, and trust to the working of the Good Law that the fermentation and unrest may soon become clarified.

Dr. Willman's little book is a portion of that duty well done. We have already called attention to it and can warmly recommend it to our friends as well as to their patients. For those interested we repeat the reference: "The Errors of Mind-Healing," by R. Willman, M. D. The Advocate Publishing Company, St. Joseph, Mo. Price, one dollar.—Ed.]

THE LANCET-CLINIC IN A NEW DRESS

The Lancet-Clinic (Cincinnati), which commences its one hundred and third volume with the present year (January 1), does so in a new form, conforming to the uniform style of the other American medical weeklies, "even though the journal in its contents is first of all a nonconformist." As in the past, so for the future *The Lancet-Clinic* "aims to have individuality, to stand for well-recognized principles of medical journalism; and it will express its convictions without fear and favor."

The Lancet-Clinic has for years been a welcome visitor to many physicians' desks and will no doubt continue so in the future. We wish our esteemed contemporary every success.

THE REWARD OF "TEMPERANCE"

In a recent number of *CLINICAL MEDICINE* I note what one correspondent, under the caption of "Facts and Fads," has to say about the attainment of remarkable longevity in several instances quoted, showing that these old people followed no special rules in their diet but ate whatever appealed to them.

This reminds me of a story related by the late Capt. N. B. P. who, when on a gunning

trip at Thimble Islands with a party of friends one foggy, drizzly day, when shooting was impracticable repaired to an out-building to clean his fowling piece. There he encountered an old sportman 80 years old, likewise cleaning a gun.

He inquired of the old man his age, to which he replied: "You will have to ask pa, he is in the other room."

"Pa" was interviewed on the subject, and on being asked his own age, replied that he was 101 years old.

"Well," responded the Captain, "You must have been a very temperate man to have reached such a good old age."

"O yes," responded the old fellow, "I have always smoked and chewed tobacco and drunk all the New England rum I could get."

GEO. D. STANTON.

Stonington, Conn.

GIVES MEDICAL LIBRARY TO STATE UNIVERSITY

A library of over 1,100 volumes on medical subjects has just been given to the school of medicine at the University of Wisconsin by Dr. S. Byron Robinson, professor of gynecology and abdominal surgery at the Illinois Medical School, who was graduated from the University of Wisconsin in 1878.

The addition of this important collection, containing many valuable books on the history and development of medicine and allied subjects during the past 200 years, gives the state university medical school one of the largest libraries of any state institution of its kind in this country.

Dr. Robinson, who is a native of Mineral Point, Wis., after graduating from the university in '78 attended Rush Medical College, from which he received the degree of Doctor of Medicine in 1882. He afterward studied in Heidelberg, Berlin, Vienna, and London.

For the past thirteen years he has been professor of gynecology and abdominal surgery at the Illinois Medical College. He was gynecologist at both the Woman's Hospital and at the Mary Thompson Hospital, and attending surgeon at the Frances Willard Hospital, Chicago.

Dr. Robinson is author of two important books, "Practical Intestinal Surgery," and "Landmarks of Gynecology," both two-volume works, and has also contributed more than 500 articles to the medical journals.

VARIOLA OF FETUS

Mrs. W., age 26, of slender build but in good general health, pregnant four and one-half months, developed smallpox on Nov. 20. The eruption was well developed and scattered over the body, affecting the scalp, soles of feet and palms of hands; scaling was completed Dec. 11. While the eruption was pronounced, there was no pitting. The patient was in excellent health during quarantine, but too thorough a house-cleaning and too free a use of antiseptics brought on an indisposition for which she consulted me. She complained of weakness, headache and a burning sensation of the skin of the trunk and arms. There was a fine papular rash on hands, arms, feet and legs, due no doubt to the application of carbolic-acid solutions. Indicated treatment brought immediate relief, but the headache and lassitude persisted, and the patient complained of feeling feverish every day toward evening. Beginning Dec. 15, regular temperature readings were taken and the fever was found to range from 100.5° to 102.5°F., daily, increasing after a few days to 102.5° to 103.5°F. There was a typical tongue and slow pulse, while the bowel condition showed a septic state.

Fetal movements were pronounced and were determined by palpation as well as by the patient's own sensations. These movements ceased on Dec. 25, and labor occurred two days later, ushered in by a sudden hemorrhage with pains. The temperature began to fall by lysis on Dec. 24, reaching 99.4°F. on the day labor set in, and has been two degrees below normal since that date. At the present writing, Jan. 4, the patient feels fine, pulse 72, temperature 97, rather thin in flesh but cheerful and possessing an excellent appetite.

The fetus was a well-developed male, approximately five months, skin dark-red,

and showing beautifully the whitish scars of smallpox eruption. The pocks extended into the true skin and the eruption was well scattered over the whole body and affected the scalp, palms of hands and soles of feet, as had been the case in the mother.

The indisposition, the headache, tongue, pulse, temperature and bowel indications pointed to typhoid fever as strongly as to sepsis from the dead fetus. Against sepsis from fetus stood the fact that the latter was viable until at least twelve days after the temperature began its typhoid range and was approaching the normal when labor occurred. Typhoid fever frequently runs its course in fourteen days under the intestinal antiseptics and clean-out, keep-clean treatment.

R. J. SMITH.

Collinston, Utah.

[Thank you for this interesting and well-reported case, Doctor. While acute exanthemata are frequently communicated to the fetus in utero, concrete examples like the above are always of interest. Your differential diagnosis from a typhoidal condition was very correct.—ED]

PUERPERAL ECLAMPSIA SUCCESSFULLY TREATED

The reports of Dr. Jameson in the June, and those of Sophia Brunson, Dr. Hawkins and Dr. Iles in the September number of CLINICAL MEDICINE, under the above caption, are so *apropos* of our own recent experience, that this seems worthy of report along the line of practical therapy.

December 10, 1909, J. D., colored, age 17, primipara (married), sent to us for assistance in labor. Found the woman in labor, kneeling on the floor, clad but in a night dress, with the thermometer at zero. Time, 10:30 p. m. There was edema of the lower extremities; urine was passed; bowels were constipated; child alive; os uteri dilated to about the size of a silver dollar. She was delivered at 4 a. m. (Dec. 11) of a 6 1-2 pound male child; R. O. A. position; placenta normal; labor natural. Left her

at 5 a. m. with uterus well contracted and retracted, and a pulse of 90.

We were summoned again at 10 a. m. and found her in a severe epileptiform convulsion, of which she had had several before we arrived. Temperature subnormal, pulse full and 110, but there were no apoplectic symptoms. Drew off from the bladder about 2 ounces of urine, which was highly albuminous. Got her to swallow 30 grains of compound jalap powder; gave a hypodermic injection of hyoscine, morphine and cactin; put dry cups to the lumbar region, followed by sinapism to the same spot and to the feet; also administered chloroform by inhalation during the recurring convulsions, which returned about every twenty minutes at first.

In one hour we gave her a hypodermic injection of pilocarpine hydrochloride, gr. 1-8. She was now profoundly unconscious, and the paroxysms occurred less frequently. During the next hour it was necessary to turn her on the side to drain away the profuse salivary and pharyngeal secretions; this left her relaxed, with occasional paroxysms of hysteroid contractures. As she was now relaxed, we gave her an enema of warm table-salt solution, one quart, which was repeated later with 15 grains each of potassium bromide and chloral; both enemata were retained, with the effect of inducing a free flow of urine. There was no recurrence of the convulsions, and the woman remained in a stupor for twenty-four hours.

Dec. 12. The patient's temperature was normal, the pulse 100. She was aroused to take a powder of calomel, rhubarb and podophyllum, as the bowels had not moved; also we prescribed a 5-grain capsule of theobromine salicylate (Merck), three times daily. The albuminuria disappeared. The fourth day, however, some fever from lactation was noted; otherwise, save for some hysterical nervousness, for which we prescribed the bromides and valerian, the woman made an uninterrupted recovery.

After delivery the fact was revealed that for some months previous to the termination of her pregnancy the woman had acted queerly, while the edema had been only

moderate and confined to the lower extremities. We noticed that the convulsive paroxysms were quickly induced by any digital or instrumental manipulations about the anal or vaginal orifices (as in giving the enemata)—a “perverted reflex action of the spinal medulla.”

There never has been shown anything that forces upon us the conviction that there is any intimate connection between the uterus and the kidney. The true puerperal convulsion can occur only when the spinal cord has been acted upon by an excited plexus of uterine nerves. The etiologic factors may act either centrally or eccentrically, in our case the cause being toxic, to wit: uremic. The exciting cause we took to be the acute suppression of the kidney function due to the exposure during labor, when the system is very susceptible to extremes of temperature. We have had a similar experience with another negro woman in labor who had ignorantly exposed her person to the low winter temperature and in whom lobar pneumonia complicated the puerperium.

As factors in the etiology of puerperal eclampsia we generally have found, in our cases, albuminuria and acute renal suppression; this, however, does not negative the fact that these convulsions may occur in nonalbuminuric women.

To treat successfully such a case is a cause for congratulation, as one-fourth of the cases are said to result fatally. Primiparae are most frequently the subjects. The attack may come on before, during or after labor. Eclampsia occurring before labor is more dangerous than when it follows. Coma after the first convulsion is a grave omen. After the paroxysm stupor is the rule, but some women are rational and convalescent, evidencing no marked symptoms until the attack is repeated. In our case marked restlessness was a sure prodrome of the recurrence.

The spasms were so well controlled after the sedative and relaxing action of hyoscine-morphine, in addition to the sialagog depletion and the diuretic effect of the saline enemata, that the emergency seemed to be

fully met, so that the veratrine treatment was not administered, although it was considered. The alkaloidal therapeutists warn us to be careful of morphine in full doses in this condition, but in the hyoscine, morphine and cactin combination we have never feared to give it to the full effect. With Dr. Iles we can say, “give dose enough,” after you know your alkaloids, and you will never sink into the rut of uncertainty or fall down upon the path of expectancy. *Qui docet discit.*

PENNEBAKER AND TRIPP.

Harrodsburg, Ky.

THE OXYGEN BATH

Under the above caption we have described, after an article in *The Practitioner* for September, 1909, an adaptation of Sarason's ozet bath. In a personal communication, the makers of the material used for making up the bath call attention to the fact that the catalyzer in the perogen bath is not manganese borate, as in the German ozet bath. This salt causes a disagreeable black discoloration of the water, tub and towels, a drawback from which the perogen bath is free.

We gladly insert this correction of a mistake unwittingly made.

HEART TROUBLE OR INDIGESTION, WHICH?

“Doctor, I'm sure I have heart-trouble. There is so much distress here,” placing her hand over the precordium, “and my heart palpitates so. I am sure I eat enough, but the food is not relished. I have such awful dizzy-spells and sometimes almost suffocate. I'm sure, it's my heart, Doctor.”

The doctor is not so sure. He listens to all the woman says, retaining well in mind the symptoms described. Examination shows a good heart working against fearful odds. “When does your trouble come on?” he asks. “Oh, when I'm tired, usually at night, after a hearty meal.”

The physician has listened with marked attention and courtesy, but he has his own

opinion. He proceeds to his inner office and puts up some appropriate digestant, together with calomel and anticonstipation granules, and a laxative saline. These he gives to the lady and politely bows her out.

After two days or so this woman meets a friend, and the latter asks incidentally, "Do

realize the importance of "indigestion" as a causative agent for "heart trouble."—Ed.]

LEPER CASES FROM THE PHILIPPINES

You recently published some leper pictures taken in the Molokai (Hawaii) Settlement. I am mailing you a couple taken by a photographer in my employ in the Philippine Islands, at Manila, shortly after the occupation of that city by the American soldiers in the fall of 1898. A few silver coins judiciously administered enabled me to review the entire colony of lepers in the hospital and group the worst types for pictures. You will note the picture of myself, standing in the rear of the leper group.

There were many more victims equally as bad as shown in these pictures, but I could not crowd them into a photo although I had some lie on the floor and expose either hands or feet, show-



A group of Philippine lepers

you know about Doctor Blank; is he a good doctor?"

"Good? Yes, indeed, he is. I consider Doctor Blank one of the leading lights of his profession. Why, he cured me of a *serious heart trouble*, and I had to go to his office only once! Good? He's the best man in this country. He knows his business."

F. A. PITKIN.

Palmyra, N. Y.

"Tis an oft-told tale, well re-told, Doctor. And, yet, many a young medico will need many a sad experience before he comes to

ing loss of fingers and toes.

WALTER MILROY BECK.

Hanley Falls, Minn.

MALARIAL HEMATURIA

By experience, I have learned to differentiate two forms of malarial hematuria.

One runs a mild course of two or three days, always tending to recovery; in fact, this form will usually get well "In spite of the treatment."

The other form is pernicious, rapid in its onslaught, terrible in its results, and will invariably prove fatal unless controlled in

from twenty-four to forty-eight hours from the onset.

The milder type I have treated with solutions of epsom salt, giving sponge baths every hour or so, as hot as can be borne. With this I usually give epsom salt internally every hour, alternating with a full glass of hot normal salt solution every hour, together with enematas of the same.

Usually one hypodermic of morphine hydrobromide, gr. 1-6; atropine valerianate, gr. 1-250, and strychnine arsenate, gr. 1-67, will control the vomiting, and small doses of quinine bisulphate, leptandrin, and capsicum, every three and one-half hours for forty-eight hours, will prevent a recurrence. Of course this should be followed with tonics

to fit each case for at least thirty days.

It is not so simple to treat the pernicious form. Usually the patient is seized with the classical chill, followed by persistent vomiting and retching, intense jaundice and port-wine urine. There is also either extreme restlessness, flushed face, high fever with bounding pulse, etc., or cold, clammy, sticky skin, dilated or pinhead pupils more or less irresponsive to light, weak thready or intermittent pulse and a very high fever, although I have seen one case that showed a subnormal temperature for two hours.

The successful treatment of this disease should be based on the pathology of the condition, as well as upon the character of the symptoms as they arise. Personally, I believe the intense jaundice and port wine urine to be both due to disintegration of the

blood cells and to the selective deposition of the two prominent coloring matters therein contained, in the skin in the first place, and in the urine in the second. I do not believe that we have in any instance a jaundice *per se* from the liver, nor hemorrhage from a congested kidney; neither organ is disturbed



Another group of lepers. Dr. Beck in the rear

to a greater degree in this disease than is usual in any malarial condition. Be that as it may, I have not the space here to discuss it pro or con, but will mention it in passing in order to explain my reasons for the treatment I use. Having to treat such a case as I have just described, I go to work for the time for folded hands has passed.

I first prepare a hypodermic of morphine hydrobromide, gr. 1-8; gelseminine, gr. 1-50, provided I have excitement, flushed face, bounding pulse, etc. If the other type described prevails, that is cold, clammy skin, etc., I substitute atropine valerianate, gr. 1-50, for the gelseminine and add cactin, gr. 1-67 to the combination. After giving this, I prepare quinine and urea hydrochloride, 5 grains, and give this hypodermically in the opposite arm. In either kind of case, I then sponge the pa-

tient all over for at least twenty minutes or half an hour with epsom-salt solution, two ounces to one pint as hot as can be borne, and repeat as long as fever is high, every hour or two hours. By this time the first hypodermic has quieted the stomach and I begin to administer as large doses of the calomel, podophyllin and bilein tablets, as I think the patient can stand, usually one tablet every two hours. With each dose, I give a tablet of intestinal antiseptics dissolved in hot water.

With the intensely congested type of disease, however, I do not depend on this slowly acting purgative, but give at once one-half minim of croton oil in glycerin on the back of the tongue and repeat at half hourly intervals until I obtain results. I follow the calomel, podophyllin and bilein compound, after it begins to act, with epsom salt, and do not stop at one dose, but keep it up in small doses hourly, alternating with normal salt solution, one glassful, *hot*, until I am sure that bowels and kidneys are both acting well. I use this practically as a routine measure with all cases.

Hypodermic injections of quinine and urea hyperchloride I repeat in uniform doses hourly until 20 grains have been given, and then every three and one-half hours until the urine clears, which it usually does in from twenty-four to forty-eight hours. If the needle be sterilized and the site of puncture be rubbed well with alcohol before and after each injection of quinine, no abscess need be feared. The hypodermics of morphine hydrobromide with either gelseminine or atropine valerianate and cactin, I also repeat hourly or until in the first instance my patient is quiet and shows the effect of both drugs, or in the latter instance until he reacts from the profound shock; and then I give enough to maintain the effect gained.

The large, classical "knock-down-and-drag out" doses of calomel and quinine sulphate poured into these cases of old—and for that matter by some practitioners still living—are not only uncalled for, but actually harmful. No real hematuric patient can retain a dose of quinine sulphate in his stomach long

enough for it to be absorbed, so that it only serves to irritate further an already irritated mucosa. Small doses of calomel, podophyllin, bilein and strychnine arsenate followed by epsom salt or saline laxative unload the liver quite as effectively as do the massive doses of calomel without the same risk.

In passing, I wish to speak of the virtues of saline laxative in these cases. If swallowed rapidly, while it effervesces, the carbonic-acid gas seems to soothe the mucosa in a wonderful way. Of course in these cases I give the sulphocarbolates—always in solution as hot as can be swallowed and with a lot of water. Like Dr. F. E. Wood of Mexico, I always give my sulphocarbolates along with the purgative and I believe I get better results. I think the doctor deserves our thanks for bringing this fact before the "CLINIC family." I have used his method many times, in many cases, and always with good results. As in all other conditions, I always satisfy myself that the bowels are indeed cleaned out and I give the epsom salt once or twice a day—sometimes a dose of castor oil also for a week after the urine clears. As a precaution against relapse, as soon as the stomach is normal I give a capsule containing quinine bisulphate, 3 grains leptandrin, one grain; capsicum, one grain, every four hours, night and day for two weeks. If my patient is very weak, I added hydrastin, 1-2 grain, and strychnine arsenate, gr. 1-134, to the above capsule. At the end of two weeks, I drop this, with the exception of one capsule at bed-time, and give triple arsenates with nuclein after meals for at least thirty days.

As to diet, I confine it to buttermilk, corn bread, grape juice, hot lemonade, rice water and any real good gruel or soup. This method has been uniformly successful with me in this disease.

I forgot to mention that failing to control the fever satisfactorily with the hot baths I give small doses of acetanilid with veratrine, gr. 1-134, every hour, always with a drink of real hot water.

W. P. BARRON.

Carmona, Tex.

Esperanto for Physicians

THE VERB

We are now in a position to give a complete paradigm of an Esperanto verb, which will serve for all verbs, there being *no irregular verbs in Esperanto*, not even the verb *esti*, "to be," which is irregular in practically all other languages.

FRAPI, TO STRIKE

ACTIVE VOICE

Present

<i>Mi frapas</i> , I strike	<i>Ni frapas</i> , we strike
<i>Ci</i> * (or <i>vi</i>) <i>frapas</i> , thou strikest	<i>Vi frapas</i> , you strike
<i>Li</i> , <i>ŝi</i> , <i>ĝi</i> , or <i>oni frapas</i> , he, she, it, or "one" strikes	<i>Ili frapas</i> , they strike

[**Note.* *Ci*, thou, is rarely used, except in countries where "thou" is commonly used to mark intimacy, affection, or social inferiority.]

Past

<i>Mi frapis</i> , I struck	<i>Ni frapis</i> , we struck
<i>Ci</i> (or <i>vi</i>) <i>frapis</i> , thou struckest	<i>Vi frapis</i> , you struck
<i>Li</i> , <i>ŝi</i> , <i>ĝi</i> , or <i>oni frapis</i> , he, she, it or "one" struck	<i>Ili frapis</i> , they struck

Future

<i>Mi frapos</i> , I shall strike	<i>Ni frapos</i> , we shall strike
<i>Ci</i> (or <i>vi</i>) <i>frapos</i> , thou wilt strike	<i>Vi frapos</i> , you will strike
<i>Li</i> , <i>ŝi</i> , <i>ĝi</i> , or <i>oni frapos</i> , he, she, it, or "one" will strike	<i>Ili frapos</i> , they will strike

Conditional

(<i>Se</i>) <i>mi frapus</i> , (if) I had struck or should strike	(<i>Se</i>) <i>ni frapus</i> , (if) we had struck or should strike
(<i>Se</i>) <i>ci</i> (or <i>vi</i>) <i>frapus</i> , (if) thou hadst struck or shouldst strike	(<i>Se</i>) <i>vi frapus</i> , (if) you had struck or should strike
(<i>Se</i>) <i>li</i> , <i>ŝi</i> , <i>ĝi</i> , or <i>oni frapus</i> , (<i>if</i>) he, she, it, or "one" had struck or should strike	(<i>Se</i>) <i>ili frapus</i> , (if) they had struck or should strike

Imperative

<i>Mi frapu</i> , let me strike	<i>Ni frapu</i> , let us strike
<i>Ci</i> (or <i>vi</i>) <i>frapu</i> , strike thou	(<i>Vi</i>) <i>frapu</i> , strike (ye)
<i>Li</i> , <i>ŝi</i> , <i>ĝi</i> , or <i>oni frapu</i> , let him, her, it, or "one" strike	<i>Ili frapu</i> , let them strike

The *nice use of the conditional* is somewhat hard for many English students, owing to the English custom of mixing up the conditional with the subjunctive and indicative forms. There is always a "but" in the conditional proper; thus: "If I had trephined immediately [but I did not] still he would not have recovered." *Se mi estus krani-borinta tuĵ, tamen li ne estus resaniĝinta.* "If he should be [or were] appointed surgeon in chief [but it is uncertain whether he will

be] he would make an energetic head." *Se li estus difinita por ĉefĥirurgiisto, li farus energian estron.*

But in such a statement as this: "If we cut open the heart we find that it has four chambers and four sets of valves," there is no condition or supposition implied, no antithesis suggested. The statement is equivalent to the statement of fact: "When we cut open the heart we do in fact find that it possesses, etc." Consequently in Esper-

anto, as in English, the indicative is used: *Se ni distranĉas la koron ni trovas, ke ĝi posedas kvar kamerojn kaj kvar valvarojn (valvo, a valve; aro, a set, or collection).*

In like manner, there is no condition implied in the phrase, "If I ask the obstetrician to make haste he will start immediately." *Se mi petos al la akuŝisto, ke li rapidiĝu, li tuj ekiros.*

The conditional is used, however, in Esperanto, as in other languages, to soften a request and render it less seemingly imperative. Thus, "Would you do that for

me?" *Cu vi volus fari tion por mi?*

After verbs of wishing, ordering, directing, etc., either the infinitive or *ke*, that, followed by the imperative, may be used: e. g., "I told him to do that." *Mi diris al li fari tion; or mi diris al li ke li faru tion.* (I told him that he do that.) "I wish her to do as I tell her (that which I tell her): *mi deziras ke ŝi faru tion kion mi diras al ŝi.* [Note, however, "I wish she would do as I tell her (which she does not)." Here the conditional is used, *Mi volas ke ŝi farus tion kion mi diras al ŝi.*]

Participles

ACTIVE

Present: *frapanta*, striking
Past: *frapinta*, having struck
Future: *fraponta*, being about to strike

PASSIVE

frapata, being struck
frapita, having been struck
frapota, being about to be struck

COMPOUND TENSES

From the active participles the compound tenses are formed by the aid of the auxiliary verb, *esti*, to be. *Havi*, to have, is never used.

Present

<i>Mi,</i> <i>Ci (or vi)</i> <i>Li, ŝi, ĝi, or oni</i> <i>Ni,</i> <i>Vi</i> <i>Ili</i>	<i>estas</i> am, is, art, are	<i>frapanta</i> , striking <i>frapinta</i> , having struck (i. e., have struck) <i>fraponta</i> , about to strike
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Past

<i>Mi</i> <i>Ci (or vi)</i> <i>Li, ŝi, ĝi, or oni</i> <i>Ni</i> <i>Vi</i> <i>Ili</i>	<i>estis</i> was, wert, were	<i>frapanta</i> , striking <i>frapinta</i> , having struck (i. e., had struck) <i>fraponta</i> , about to strike
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Future

<i>Mi</i> <i>Ci (or vi)</i> <i>Li, ŝi, ĝi, or oni</i> <i>Ni</i> <i>Vi</i> <i>Ili</i>	<i>estos</i> shall, shalt, will or wilt be	<i>frapanta</i> , striking <i>frapinta</i> , having struck (i. e. shall have struck) <i>fraponta</i> , about to strike
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Conditional

<i>Mi</i> <i>Ci (or vi)</i> <i>Li, ŝi, ĝi, or oni</i> <i>Ni</i> <i>Vi</i> <i>Ili</i>	<i>estus</i> should or shouldst be or have been	<i>frapanta</i> , striking <i>frapinta</i> , having struck <i>fraponta</i> , about to strike
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CLINICAL · MEDICINE POST-GRADUATE SCHOOL & THERAPEUTICS

George F. Butler, M. D., Director
Thomas J. Mays, M. D.
Otto Juettner, M. D.

C. E. de M. Sajous, M. D.
William F. Waugh, A. M., M. D.
Alfred S. Burdick, A. B., M. D.

PART III.—LESSON SIX

PNEUMONIA

INTRODUCTION

This disease has been recognized since the time of Hippocrates, who described it very accurately, especially the recovery by crisis occurring on an uneven day.

The frequency and the fatality of pneumonia place it in the front rank of the infectious diseases prevailing in the temperate climates. It has of recent years displaced tuberculosis in this regard, and the late Dr. Frank W. Reilly, for many years Assistant Commissioner of the Department of Health of Chicago, always referred to it as "the new captain of the men of death." This disease is no respecter of person, age or sex. Fifty percent of all cases occur between the ages of twenty and forty. We find it in the newborn; from then its frequency gradually increases up to the sixth year, then there is a slight decrease to the fifteen-year period, then a gradual increase again. Eighty percent of all cases occur between the ages of ten and fifty, and 80 percent of cases occur among males, probably owing to their greater exposure. Before the age of fifteen pneumonia is usually secondary to another infection. Many cases occurring before the second year of life and diagnosed as

pneumonia are really influenza. It is much more frequent in cities than in rural districts.

The Cause of Pneumonia.—The pneumococcus, or diplococcus pneumoniae was proven definitely to be the cause of pneumonia by Fraenkel, 1884, and was so confirmed by Weichselbaum, 1886, although the organism had been primarily discovered by Pasteur in 1880, and a little later by Sternberg, who had injected rabbits with saliva from pneumonia patients, producing a septicemia in these animals. This organism is a diplococcus, surrounded by a capsule. It grows well on ordinary media, the colonies resembling those of streptococci, of which it is considered by many to be a variety. It stains well with ordinary dyes and is gram-positive. It is found in dust, in saliva, and in from 30 to 50 percent of normal throats.

The pneumococcus is found in 98 percent of all cases of lobar pneumonia. It is the only organism present in about 18 percent. Two percent are due to the pneumobacillus of Friedlaender. In 60 percent of the cases staphylococci are associated with pneumococci. In 26 percent streptococci and pneumococci are found. In one percent of

the cases staphylococci and streptococci alone are present.

The pneumococci have less resistance to drying and other adverse conditions than tubercle bacilli, but they are also able to live in the normal, healthy mouth and tubercle bacilli are not. They remain alive in dry sputum under certain conditions as long as fifty-five days, but in ordinary dust and in the fine droplets expelled by coughing their life is sustained only a few hours.

Individual Susceptibility.—In this disease, the susceptibility and the resistance of the individual plays a greater role than in any other of the infectious diseases. The pneumococci found in normal throats have a virulence that is equaled by the resistance of the patient. If anything should reduce this resistance, they may produce a mild local infection such as tonsillitis, with or without a pseudomembrane, or they may produce a peritonsillar abscess, or they may invade the interstitial tissue of the lung by way of the bronchi, producing lobular pneumonia; again, they may invade the blood, producing lobar pneumonia or merely septicemia without pneumonia.

It is also possible that pneumococci from a case of pneumonia, possessing a high degree of virulence, may produce the disease in a susceptible individual, or even pneumococci from the normal throat of an individual possessing a high resistance may have sufficient virulence to produce the disease in some less resistant person.

Predisposing Causes.—The predisposing causes are loss of resistance, produced by factors such as traumatism, sudden, severe exposure, alcohol, or other chronic diseases, diabetes, influenza, etc. The disease is very frequent in persons of seeming fair health but whose resistance has been lessened by a weak heart, crippled kidneys, cirrhotic liver or by general arteriosclerosis.

Prevalence.—The disease is especially frequent in the middle Atlantic coast states, least in the Gulf and South Atlantic coast states. It is more frequent in the city (and seems to be increasing) than in the country, where it seems to be decreasing. In the United States, during the census year of

1900, 105,971 deaths from pneumonia occurred. This is 106.1 per thousand deaths from all cases.

The incubation period varies from a few hours to a day, rarely longer.

Climatic Influences.—J. M. Anders, in *American Medicine*, September 3, 1904, gives the results of ten years' observation as to the effect of meteorological conditions, as follows: Season has a marked effect, especially winter and spring. With a low temperature there is a high death-rate. The death-rate also increases with the barometric pressure, which is inversely as the temperature and therefore governed by it. The wind velocity also has a marked influence upon the barometric pressure and upon the temperature, and therefore upon the disease. A low temperature, with a high pressure and high wind-velocity, are accompanied constantly and uniformly with an increased mortality from pneumonia. The above conditions probably act indirectly and merely represent the "shut-in" season, lack of ventilation having a great deal to do with the prevalence of the disease.

Pneumonia Is Not a Local Disease; it is really a septicemia. Rosenau (*Journal of Infectious Diseases*, 1904, Vol. 1, page 280), found pneumococci in the blood in 132 out of 145 cases examined. The apparent localization of the disease in the lungs is probably due to the greater volume of blood and therefore a greater number of pneumococci. The exudate in the alveoli is due to the direct action of the pneumococcus. The pneumococci, according to Wolff (*Journal of Infectious Diseases*, May, 1906) persist in the blood for days after the crisis has passed and are then just as virulent as during the fever.

Complications.—The pneumococci are themselves the cause of most of the complications, such as pleuritis, peri- and endocarditis, peritonitis, otitis, meningitis and arthritis. Raw (*British Medical Journal*, December 21, 1901), states that arthritis occurs in one percent of all cases, and frequently appears before other symptoms; usually one of the joints on the same side as the lung involved was affected, the order

of frequency being the knee, shoulder and ankle. It is important to note that these cases were more common and more severe in alcoholics, and were usually of a purulent character, therefore requiring aspiration. Meningitis and mastoiditis are frequent complications and usually appear about the second day. Enteritis and conjunctivitis, in common with other localized serous or mucous-membrane infections due to pneumococci, usually tend to recover. If the patient's general resistance is good, there results a local infection; with a lessened resistance, general septicemia occurs.

Specific Immunity to Pneumonia.—

Some immunity is always produced, but it is usually of a transient character. Recurrences are the rule in from thirteen to thirty-three percent of the cases, showing that some acquire, as in influenza, a predisposition to the disease. As yet there is no theoretical or practical basis for a serum therapy, and none of the many serums so far prepared are of any practical value. Talmon (*La Medicine Moderne*, March 26 and April 2, 1902), reports 100 cases treated with diphtheria antitoxin, the mortality being only fourteen percent. He claims good results in cases over fifty years of age. The action of the diphtheria antitoxin was probably a stimulation of phagocytosis. In this connection Salisbury (*Practical Medicine Series*, October, 1903, page 115), says: "Inasmuch as leukocytosis precedes resolution and is evidently necessary to that process, efforts to arouse leukocytosis are rational. The use of nuclein and of the salicylates and a form of diet containing nuclein, or such as would excite leukocytosis, has its justification on this ground."

The Cause of Death in Pneumonia.—

Death is due to one of two general causes, either the toxic effect produced upon the heart, brain or vasomotor nerves; pulmonary edema, resulting in respiratory failure; or complications such as meningitis, etc., Ransdell (*American Medicine*, Feb. 11, 1905) says: "The death-rate from pneumonia in pregnant women is much higher than ordinarily. About fifty percent abort and among them the mortality is higher than

among others. The abortion is unquestionably due to the increased amount of CO_2 in the blood."

Prophylaxis in this disease is the same as in influenza. See *AMERICAN JOURNAL OF CLINICAL MEDICINE*, of February, 1910, page 228.

The sputum in all cases should be destroyed before drying, by means of a 5 percent solution of carbolic acid, lysol, kreolin or trikresol. Bichloride solution coagulates the sputum but does not disinfect it.

Urine.—The urine in pneumonia shows the general characteristics of a fever urine, being small in amount, of high specific gravity, viz. 1.030 to 1.040, practically always highly colored, with an increased amount of urea. If the urea diminishes after the third day, we may expect delayed convalescence, diarrheal attacks, pleurisy with effusion, empyema, etc. Immediately after the crisis the amount of urea is increased about threefold. The chlorides are usually absent, especially from the third to the fifth day. Such a retention of chlorides also occurs in sepsis, typhoid fever and in cardiac incompetency. Their reappearance is due to the absorption of the exudate and always occurs before the temperature falls, indicating the beginning of convalescence. Albumin is present in about fifty percent of the cases during the fever and practically always during resolution. Hyaline and granular casts are the rule. Renal cells and red blood-corpuscles are frequently found, although nephritis occurs only in from one or two percent. The diazo reaction occurs in about twenty percent of all cases. A trace of bile may appear, and frequently acetone. Uric acid is always increased from the destruction of nucleoproteids. Uremia, however, is very rare.

Blood.—The blood shows a characteristic inflammatory leukocytosis, neutrophilic in type. It coagulates very rapidly, owing to an increased fibrin content. The red blood corpuscles are always absolutely diminished, but this anemia may not be apparent and we may have more than the normal number of red blood corpuscles in the peripheral blood, from cyanosis. After

the crisis the number of red blood-corpuscles and the percentage of hemoglobin fall. Nucleated red blood-corpuscles are rare, occurring in not more than two percent of the cases. They indicate a severe infection or a low resistance.

The blood plaques are decreased during the fever but they increase rapidly after the crisis.

The leukocytosis usually precedes the chill, and if it occurs at all, is manifest within six hours thereafter. In mild cases the average number of leukocytes is 6,000 to 12,000; in severe cases, 20,000 to 36,000, or even 100,000. It is greater in children. There is an absolute increase in the number of neutrophiles, usually being over ninety percent of the total number of white blood cells. There is a corresponding reduction in the number of leukocytes to two or four percent.

The number of leukocytes usually returns to normal within forty-eight hours after the crisis occurs. This fall, however, is gradual and usually begins before the crisis. In complications, as for instance in empyema, gangrene, abscesses, etc., the leukocytosis continues. Usually a pseudo-crisis has no effect upon the white blood cells. After the crisis we usually have an eosinophilia, and if this occurs before the crisis, it is a favorable sign. A leukocytosis persisting after the crisis indicates a relapse or a complication. In children we may have a lymphocytosis instead of a neutrophilia, resembling in some respects leukemia. If leukocytosis with neutrophilia is present, typhus, typhoid, malaria, acute tuberculosis, influenza and the catarrhal pneumonia of influenza may be excluded from the diagnosis. The absence of a neutrophilic leukocytosis is an unfavorable prognostic sign, although its presence does not necessarily mean that the patient will recover. Some mild cases, with good resistance, may show only a slight neutrophilia without any increase in the number of leukocytes.

Most cases of pneumonia fall into one of three groups as regards the degree of leukocytosis present. A mild infection, with a vigorous reaction, shows a slight leukocy-

tosis. These cases all recover but they are only a small proportion of the total number of cases. A severe or moderate infection, with a marked leukocytosis, may or may not recover, depending upon the ability of the patient to maintain this leukocytosis. This class includes about ninety percent of all cases. A severe infection with a feeble reaction shows no leukocytosis. There is not sufficient resistance on the part of the patient to produce a leukocytosis, and these cases almost invariably terminate with death.

J. FAVIL BIEHN.

Chicago, Ill.

THE TREATMENT OF PNEUMONIA

Prophylaxis.—As many of the victims of pneumonia attribute, and rightly so, the onset of their case to an exposure to cold, it is evident that such exposures should be avoided. And this is especially true in those whose bodily resistance is lowered through sickness or through excesses of any kind. More careful attention should be given to the ordinary "colds," as the mucous membrane offers less resistance to the entrance of a pneumonic infection during such attacks. The aged should be watched carefully during their winter cough or during attacks of bronchitis which might be trivial in younger persons.

Plenty of fresh air, especially in sleeping quarters, will do much to minimize the danger of pneumonia.

The sputum of afflicted patients should be burned and in hospitals the patients should be isolated.

The Sick Room.—The proper care of the patient's environment is very essential. The room should have a southern exposure, thus admitting plenty of sunlight. There should be many windows which remain open night and day. Fresh air and plenty of it is the main consideration in the treatment of pneumonia; for it is upon the adequate supply of oxygen that the comfort and indeed the life of the patient depends. The temperature of the room should be kept at about 60°F. While fresh air is essential draughts must not be permitted.

There is no question of the usefulness of medicated steam; a small vessel of water in which a few drops of eucalyptol, or oil of pine, or Scotch fir, have been dropped can be kept boiling over an alcohol lamp. The medication must be renewed from time to time. Except in the coldest part of the year I would recommend that the patients be kept out-of-doors. A sheltered porch is desirable. The coldness of the air is not a detriment but a positive help in soothing and at the same time invigorating the patient. Undue draughts in a room may be avoided by tacking cheese cloth across the open windows.

The bed should be firm and smooth, with the sheets pinned down to prevent crumpling. To maintain an even heat within the bed it is a good plan to spread papers beneath the mattress and to keep a hot water bottle at the patient's feet. Light, warm comforts should cover the patient while the clothing should consist of a light flannel night-shirt which opens down the front to facilitate the examination of the chest. All unnecessary furniture should be removed from the room.

As regards the personal hygiene of the patient, the mouth and nose should be cleansed daily with a boric-acid or alkaline antiseptic solution; especially should these parts be cleansed before taking medicine or food. The genitalia should be kept scrupulously clean. Care should be taken in the use of the bed-pan that the patient does not have to strain. Let the visitors be few and the nurse one who is firm and quiet.

Hydrotherapy.—In the early stages of the disease when there is severe pain in the chest the use of the hot-water bag or the hot chest-pack is indicated. The dilation of the blood vessels obtained thereby relieves congestion. Some physicians prefer applying a hot kaolin paste in a fairly thick layer over the chest, first applying to the skin of the chest a little guaiacol and camphorated oil in equal parts. In some cases I have preferred this to the chest pack, but not in the majority of cases; if the kaolin paste is applied it should be covered with a layer of cotton or a snugly fitting thin undershirt.

Later, during the height of the fever, cold sponging is soothing to the patient and reduces fever. The sponging should be done daily, even if the temperature be not high, for the purpose of cleansing the emunctories of the skin and of stimulating the removal of toxins in that way.

For reducing the temperature the application of the cold chest pack is one of the surest and most rational methods. The pack can be applied in the following manner: Several thicknesses of soft linen are cut of a size to reach more than around the body and to extend from the clavicles to the umbilicus. A cut is made so that they may fit under the arm at the shoulder, and flaps are made to come from the back over the clavicles. Two pieces of soft flannel are cut of similar size and shape.

Two of the linen cloths are wrung fairly dry from water at a temperature of 50° to 60°F. and applied to the body with one of the flannel cloths on the outside. The flaps are brought over the clavicles and the whole jacket is pinned down the front.

Such a pack may be renewed whenever it becomes warm from the body heat. Some patients may not react well to the cold pack, as evidenced by blueness of the skin and shivering, then the temperature of the water will have to be raised to 70° or 80°F.

Whenever there is intense congestion of the chest with an accompanying cerebral congestion, a hot mustard foot bath will determine the flow of blood to the lower extremities and help to give relief along with certain drug medication to be described later.

Dietary.—As in all acute fevers milk is the best food, for it contains the fat, proteid and carbohydrate molecules so essential in the body economy. To raise the caloric value of the milk, milksugar, with a value of 120 calories to the ounce, may be added so that the patient is not nauseated with the amount of milk alone which is needed to supply his daily need of 2500 to 3000 calories. Buttermilk, kumiss or peptonized milk can be given if more acceptable to the patient.

Grape juice, meat broths, soups, whey and cereals may all be added to the list if

relished by the patient and are well borne by the alimentary tract.

Egg-noggs form a very suitable food, more especially during and following the crisis as well as during convalescence.

Water should be given generously, and to insure a definite amount it should be given at stated intervals. Lemonade or mild aperients are generally agreeable to the patient and are of value for their mild diuretic or laxative effects.

Care of the Bowels.—In the majority of cases of pneumonia it is necessary to cleanse the intestinal canal thoroughly and quickly. This can be best accomplished by giving calomel, gr. 1-6, and podophyllin, gr. 1-6, at half hourly intervals for three hours, and a full teaspoonful of effervescent magnesium sulphate should be taken an hour after the last dose. This saline draught may be repeated with advantage in twenty-four and forty-eight hours. If it be possible hot water should be used. In some cases it is well to give the salts dissolved in a small quantity of cool water (not *cold*) and follow immediately with a draught of plain hot water.

If the bowels are known to have been sluggish an enema of warm salt water should be given before the medicine acts. If it is retained for a short time so much the better.

After the bowels have moved once or twice the patient receives from 5 to 10 grains of the triple sulphocarbolates (lime, zinc and soda) every three hours; a draught of water is ordered with each dose.

To Relieve the Local Congestion, three drugs given conjointly prove preeminently efficacious. Aconitine, digitalin (germanic) and veratrine are administered half hourly or hourly till the skin moistens, the temperature falls and the pulse rate reaches 80 or below.

The usual dosage for an adult is gr. 1-134 amorphous aconitine (or gr. 1-500 crystalline aconitine), gr. 1-134 veratrine and gr. 1-67 digitalin; children over twelve may receive half the above dose for six doses, then one-quarter the amount; children under twelve but over five one-quarter at first then one-eighth; patients under five receive one-

eighth of the adult dose from the first. This dosage may be reduced still further as results are secured. In asthenic cases, strychnine, gr. 1-67, is substituted for the veratrine. Either combination may be secured in granule form and so exhibited, or solutions may be readily prepared. Aconitine and veratrine are more serviceable during the first and during the beginning of the second stage of the disease.

Nuclein, in ten-minim doses, is exhibited hypodermically once or twice daily as the severity of infection may demand; if the patient is aged or weakly or the disorder somewhat advanced it is highly desirable to induce a hyperleukocytosis as rapidly as possible and I do not hesitate to give fifteen or even twenty minims night and morning. In lighter cases ten minims subcutaneously once a day and an equal quantity absorbed from the buccal mucosa every four hours will suffice.

Chest Pains which may at first be severe usually yield to two or three doses of bryonin (gr. 1-67) and hyoscyamine (gr. 1-250); or if necessary in extreme cases morphine, gr. 1-8 to 1-4 hypodermically. As a matter of fact, after the bowels have been evacuated and the defervescent begins to act comparative comfort obtains in most cases.

These are the simple and thoroughly effective therapeutic procedures called for in nine out of ten pneumonia cases. It is essential to secure rest, quiet, elimination and defervescence; to increase the natural resistance and render the tissues and fluids of the body inimical to the welfare of the invading bacteria. These things we can accomplish perfectly by taking the steps described, and very frequently no other medication will be required.

It must be borne in mind that the amount of drug which will suffice in one case will not do the work in another. Hence it is necessary to push the aconitine, veratrine (or strychnine) and digitalin combination till defervescence is secured. The same thing applies to the eliminants. If free stools do not follow the six doses of calomel and podophyllin or if the patient is in the habit

of "taking medicine for his bowels" double the dose or repeat the administration till the desired effects are obtained.

To Relieve the Cough.—Usually by the second day the cough is fully developed and a stimulating expectorant cough mixture may be required, such as the following:

Ammonium carb.....	10.0
Syrupi tolutani.....	20.0
Inf. digitalis.....	60.0
Mixt. glycyrrhizae comp. q. s.	
ad	240.0

M. Sig: 16 Cc. (tablespoonful) every three hours.

If cough be excessive codeine sulphate, gr. 1-12, or syrup of Dover's powder, 10 to 15 minims may be added to each dose, or the modified Dover's powder granule will be found beneficial. The value of digitalin in this connection will be discussed under cardiac symptoms.

Nervous Symptoms.—An icebag to the head allays cerebral congestion and the accompanying headache.

When there is restless insomnia a hypnotic is indicated to secure the needed rest. The depressant hypnotics should however be avoided. Veronal, grs. 15, or sulphonal, grs. 10, given in a warm drink and repeated in two hours may suffice.

The Kidneys in Pneumonia.—The condition of the kidneys should be daily noted and small doses of the alkaline diuretics be given, such as the acetate or citrate of potassium, gr. 15, t. i. d., in a full glass of water. If there is an existing nephritis, strophanthin or digitalin may be indicated for their influence on both heart and kidneys. The caffeine group of diuretics is very useful in these cases, notably the sodium benzoate of caffeine in large doses. If marked uremic symptoms occur great benefit can be derived from venesection. Fluid diet only should then be permitted and alcohol, if used at all, should be administered with great caution. Personally I am convinced that when the kidneys are badly involved in cases of pneumonia alcohol should not be given.

Cardiac Complications.—Owing to the pulmonary congestion the increased work

thrown upon the heart is enormous and our chief concern in the majority of the cases of pneumonia should be to consider the heart's ability to stand the test. It has long been a mooted question as to when cardiac stimulants are indicated. I am of the opinion that after the congestive stage the heart muscle should be strengthened and quieted. It does not seem advisable to wait until signs of weakness or collapse appear before administering cardiac tonics or stimulants.

For its sustaining and strengthening effect on the cardiac muscle digitalin, given in small repeated doses, is primarily thought of. Strychnine in doses of gr. 1-40 to 1-30 three times daily is a valuable cardiac stimulant and in many cases more efficient than digitalin. As regards the use of alcohol I feel that its value lies chiefly in replenishing tissue waste or rather in preventing it. It is a good diffusible stimulant, although not a cardiac stimulant *per se*, and performs especial service in those patients who are accustomed to its use. Here it is best given in the form of whisky from two to three ounces in twenty-four hours. Otherwise, however, alcohol should be reserved for an emergency to tide the patient over a critical period. It generates no new force but only enables a patient to draw less from his own reserve power. Its administration should be discontinued as soon as the desired effect is obtained.

If signs of cardiac collapse appear, such as a weak, thready, possibly imperceptible pulse, with cold, clammy sweat, rapidly acting cardiac stimulants are indicated, such as ammonia, the action of which drug upon the nasal mucus membrane is quickly conveyed reflexly to the heart long in advance of direct action from absorption of the medicine. Ether given hypodermically stimulates quickly and effectively as does also camphor. Venesection is of great value when there is over-filling of the right heart. In other cases of myocardial insufficiency digitalin and strychnine are the best remedies. It is well to remember however, that active stimulation is not indicated when compensation is undisturbed and should usually

be postponed until the crisis or just preceding it.

Respiratory Complications.—If the respiratory center becomes paretic, free elimination to overcome the toxemia, full doses of strychnine hypodermically, and inhalations of pure oxygen are invaluable. In administering the oxygen no mask should be used, for it is not advisable to allow the oxygen to be inhaled directly or too rapidly. If properly administered the respirations will be slowed, increased in depth and strength, and cyanosis will disappear. The effect must be the guide for the quantity used and for the frequency of its administration.

Should edema of the lungs occur dry-cups should be applied to the affected side or venesection done, together with the hypodermic administration of powerful heart stimulants, such as digitalin, strychnine, ammonia, ether, etc. Hypodermics of adrenalin, 1 in 10,000, are of great value in this condition.

Meteorism.—A very common condition in pneumonia, very distressing to the patient and often intractable to treatment. In guarding against this symptom appearing the patient should secure a free movement of the bowels daily by using calomel and salines. Foods which produce fermentation in the alimentary tract should be avoided. The intestinal antiseptics are also indicated. If the condition is present turpentine stupes should be applied to the abdomen and enemas of turpentine and water or milk of asafetida and water given. Eserine, gr. 1-10, hypodermically, will stimulate peristalsis in the musculature of the gut and assist in expelling the gas.

Diarrhea.—A few cases will present this distressing condition. It is usually caused by improper feeding of the patient, perhaps with a desire to supply strength rapidly by increasing the amount of food given. A grain or two of calomel followed by a saline laxative to remove food detritus and in turn followed by bismuth subnitrate, from 10 to 20 grains, will, in the majority of cases, clear up this condition. It may become necessary to add Dover's powder, 5 grains, to the bismuth, but this should not be done as

a routine procedure. An enema of starch solution with a few drops of tincture of opium may be tried if other means fail.

Pneumonia of the Aged.—In a general way the treatment is the same as that heretofore outlined. There are certain precautions to be remembered, however. The heart must be carefully watched and its strength maintained by strychnine, strophanthin or alcohol. Old people are usually benefited by the moderate use of alcohol. Digitalin is ordinarily contraindicated in these cases. External applications should be tepid or warm; the diet light and easily digestible. If the bowels are inactive they should be moved by means of suppositories or enemas. Laxatives should not be given. Catheterization should be resorted to if necessary. Free ventilation is necessary, but old people cannot endure the cold air which is so beneficial to younger patients.

Pneumonia in Alcoholics with Delirium.—In the cases which occur in persons addicted to the daily use of alcohol, a condition closely akin to delirium tremens, often develops. The patient should never be left alone lest he do violence to himself. If the mania be excessive, morphine, gr. 1-4, by hypodermic needle, should be given until quiet is secured. Whisky with peptonized milk, to which is added tincture of capsium, 3 to 5 minims, is given three or four times daily.

The condition of the kidneys must be carefully watched for the congestion that often occurs.

Crisis.—Support the heart with hypodermics of strychnine or of other rapidly acting stimulants. Here large doses of strychnine must be given. I have given as much as 1-15 grain hypodermically every three hours to an adult in the crisis of pneumonia.

Delayed Resolution.—The patient may recover his strength and feeling of good health except for a feeling of weight and irritation in the chest. Slight dulness with râles may then still be noted. Plenty of fresh air with mild exercise may be all that is necessary to clear up this condition. Painting the chest with tincture of iodine

or applying fly blisters should be tried if the condition persists. Iodides and cod-liver oil should be administered.

Empyema.—Aspirate, and if the abscess be of any size resect one or two ribs and drain out the pus cavity. Give tonics and restoratives.

When the pleuræ are markedly involved it is well to give bryonin and asclepiadin together every two hours till improvement takes place. The patient should receive nothing but milk, barley water, fruit juice and water, or clam bouillon for the first few days. Barley water with a little lemon juice added is the safest beverage and the most pleasing to the patient. It should, however, be properly prepared, if it is to have value.

When the Acute Symptoms Have Subsided it is desirable to give for a few days guaiacol carbonate, calx iodata and nuclein. The proportions I have found most satisfactory are guaiacol carb., gr. 1, calx iodata, gr. 1-2; nuclein, gr. 10; one such dose is ordered every four hours. There is no doubt that resolution is markedly hastened by the use of this formula. Later, as tonic reconstitutives are indicated, the triple arsenates (iron, quinine and strychnine) should be substituted. If resolution is slow iodine in some form is indicated. It has been my custom to use potassium iodide though calx iodata should do the work equally well.

Convalescence.—The patient should remain in bed after the crisis until there would seem to be no danger to the heart in arising. This may be one week following or three, depending upon the severity of the attack and the recuperative power of the patient. Iron, arsenic, nuclein or the triple arsenates of iron, quinine and strychnine, or other tonic restoratives should be given, and the patient should remain out of doors in the fresh air and sunshine as much as possible. Change of climate may materially cut short the period of convalescence. The condition of the appetite and digestion must regulate the quantity and kind of food given. Nutrition must be improved and body-weight increased, but efforts to force matters unduly

in these directions are unwise. Worry, care and excitement should of course be avoided.

GEORGE F. BUTLER.

Wilmette, Ill.

THE TREATMENT OF PNEUMONIA

The transfer of pneumonia from the simple inflammations to the infectious fevers has been followed by the claim now made by many, that treatment is of no avail in this malady in so far as it is a question of altering the course of the disease or of seriously influencing it.

To this the clinician replies, that when a certain treatment is instituted in a large number of cases presenting hyperemia of the lungs, the disease does stop there and does not go on to the second stage, or the stage of exudation.

The objection is made, however, that such cases are not pneumonia, since they did not go through the classic stages of the malady.

We learn, therefore, that apparently there are two pulmonary hyperemias, one of which invariably stops with hyperemia and under no circumstances goes on to consolidation, while the other as invariably goes on to consolidation, never stopping in the stage of hyperemia. It is acknowledged that these two forms of pulmonary hyperemia cannot be distinguished by any test known to the clinician pure and simple. They not only look alike, but the man who relies wholly on clinical evidence is a firm believer in the identity of the two maladies and in the efficacy of his therapeutics in breaking up the attack in the first stage and thus aborting the pneumonia.

The matter should be readily settled by bacteriologic examinations of the sputa. If the pneumococcus is found plentifully in the sputa we may safely say that the case is true pneumonia. But this testimony unfortunately has yet to be given. Until it is afforded all that we can say is that the safest plan is to institute treatment at the earliest possible moment, directed against the hyperemia, when if the attack is aborted we may or may not believe that it would

have been one of typical pneumonia had we not intervened.

Abortive Treatment of Pneumonia.—

Following the routine we invariably recommend in the treatment of febrile maladies, we begin by completely emptying the alimentary canal and disinfecting it. In the meantime, however, we have attacked the vasomotor conditions, administering digitalin to contract the paretic vessels of the pulmonary area, and aconitine to relax the spasmodic contraction of the remainder of the circulation.

If the heart is excited and the patient plethoric, in fact if the case is one which we should denominate sthenic, we add to these remedies veratrine in order to assist the aconitine in establishing a salutary cardiac inhibition, relaxing vascular spasm and encouraging the elimination of toxins by every route.

But if the patient is depressed and the condition is evidently one of asthenia, we add strychnine arsenate instead of the veratrine, because it aids the digitalin in stimulating contraction of the pulmonary vasomotors, in deepening and prolonging respiration, inciting all the vital faculties, and arousing the resisting powers of the system. Arsenic powerfully induces fatty degeneration, and acting thus upon the forming products of inflammation it tends to rid the system of them quickly and in this way promotes a brief convalescence instead of a tedious one. I shall not here attribute any other function to arsenic, since despite its use for thousands of years as a remedy, its action is not well understood.

We have, therefore, two triad combinations; one consisting of aconitine, digitalin and strychnine arsenate, the other of aconitine, digitalin and veratrine. These two are used interchangeably, accordingly as sthenia or asthenia predominates, and one may change from one to the other and back again several times during the day, in those indeterminate cases where first one condition then the other seems to be manifest. This gives us a flexible and most effective means of meeting the vasomotor conditions presented.

Beyond these the treatment is largely symptomatic, although it is probable that we should insist on the administration of nuclein as directed exactly at the central fact in the disease, that is, it arouses the vital powers of the body to resist the invading microorganisms.

Cough may be soothed by the administration of codeine, the secretions promoted by emetine.

The importance of attending to the condition of the alimentary canal is shown by the fact, well known to every clinician, that pneumonia complicated with bowel disorder is perilous and likely to eventuate in death.

How to Counteract Hypostasis.—In elderly patients when pulmonary hypostasis occurs we have an effective remedy in sanguinarine. This acts upon the pulmonary tissues as a stimulant, arousing them to sensibility and inciting their vitality in order to throw off the disease. I have learned to value this remedy very highly indeed in this condition.

Stimulating applications to the chest with change of posture and other remedies are too well known to require mention here.

Nutrition in Pneumonia.—Nutrition is of the utmost importance, but we must not forget the mechanical embarrassment which results from the ingestion of large quantities of liquids. For this reason I incline more to Juergenson's suggestion of grated raw beef, or better still, to raw oysters, rather than soups. The object is to give as much nourishment as possible with the least possible bulk, for every ounce of fluid which is imbibed imposes that much more work upon the struggling heart, which is compelled to pump the blood through the impeded pulmonary system. For this reason also I should not recommend the repeated use of bulky saline draughts as cathartics, limiting myself to a single morning dose of this sort; I prefer to aid it if necessary by concentrated saline solution thrown into the rectum or colon. These by osmotic action drain a large amount of fluid from the system and with it a corresponding quantity of toxins, to the great benefit of the patient.

Juergenson rightly attributed most of the danger to the heart, and among the various factors which he enumerated as contributing to the exhaustion of its forces he rightly ranks fever at the top of the list. In our studies concerning the effects of fever on the microorganism we seem of late inclined to forget its effect upon the patient. Eliminate the factor of fecal toxemia, restrain the fever within due limits, sustain the heart and keep up the nutrition, and the mortality from pneumonia should certainly not be large.

W. F. WAUGH.

Chicago, Ill.

PHYSIOTHERAPY IN PNEUMONIA

Pneumonia (lung-fever) is an acute croupous inflammation of the lungs, involving the vesicular structure, rendering the alveolar spaces impervious to air. The principal symptoms are a severe chill, headache, fever, pain in the chest, cough, rusty sputum and great prostration. Pneumonia is by some considered an *infectious* disease, the pathogenic element being the diplococcus of Fränkel. In the light of modern bacteriological research it is doubtful whether the germ named really represents the etiological factor of pneumonia. All clinical pathologists are agreed that inflammation of the lungs can be set up by many other microorganisms, e. g., the influenza-bacillus of Pfeiffer, the pneumococcus of Friedländer, the typhoid-fever germ, the bacillus coli communis, the ordinary pus-germs and many other varieties. I am inclined to think (and my opinion is shared by not a few) that the multiplicity of germ-types that have been found associated with pneumonia, rather makes it doubtful whether any one of them bears a true causative relation to the disease. It seems reasonable to assume that these germs are present as mere companions or concomitant phenomena, such as are observed in some form or other in or during inflammatory conditions or processes in almost any part of the body.

‡The exciting cause is most frequently atmospheric in character, coupled with a

susceptibility on the part of the individual body. From our studies of hydrotherapy we know what *reaction* means and are familiar with the disastrous results of insufficient, incomplete or absent reaction. If instead of the thermic action of a hydrotherapeutic procedure we imagine a thermic-atmospheric factor to act upon the body-surface without sufficiently compensatory reaction on the part of the cuticle and, through the latter, of the circulation, we can readily understand how the result thereof may explode at some point of least resistance and how in this way a pneumonia might be set up. Thus we find that people whose "reaction" is below par, physiologically speaking, are notoriously liable to pneumonia. This includes all persons suffering from some debilitating chronic ailment (rheumatism, Bright's disease, diabetes), and especially alcoholic subjects. We can readily understand why pneumonia is most prevalent when the atmospheric conditions are most subject to change. Males, being most exposed to these changes, are most frequently attacked.

Clinical Pathology.—In the order of frequency the lower right lobe, the lower left and the upper right are liable to be the seats of inflammation. The disease passes through three stages, (1) *engorgement* (congestion, hyperemia) from one to three days; (2) *exudation* (red hepatization) from three to seven days, and (3) *resolution* (gray hepatization) from one to three weeks. In exceptional instances there may be supuration and gangrene. Coexisting pleurisy is common (pleuropneumonia).

Jugulation of Pneumonia.—This disease is, all things being equal, the classical type of a self-limited disease. In an individual having ordinary good health the disease, if left alone and the ordinary hygienic regime being enforced, ought to run its course and terminate in recovery. In years gone by venesection was practised during the stage of engorgement. It has practically become obsolete although its rationale as an antiphlogistic is unquestioned. The loss of blood, it is true, has a tendency to lessen the patient's resisting power.

Venesection without loss of blood would be the ideal antiphlogistic method, and this is what hydrotherapy has given us in the various modes of water application which are known as "derivating" methods. "Derivation" (depletion of the congested area) is the alpha and omega of treatment during the first stage of the disease in every case. If properly applied, in suitable cases, there is no doubt that this procedure is capable of aborting pneumonia, or, failing in this, of rendering the course of the disease comparatively mild.

Onset of the Attack.—Acute pneumonia is usually ushered in by a tempestuous reaction on the part of the system (chill, convulsions, severe vomiting), followed by a rapid rise in the temperature. Embarrassment of the pulmonary circulation is marked by a rapid but full pulse, quick breathing, short inspiration and long expiration accompanied by a moan; the facial expression is anxious; there is pain near the nipple, intense prostration, etc. The picture is too characteristic to be mistaken. The treatment in this condition (I am almost tempted to call it specific treatment) hinges upon the application of the cold moist-pack from the feet to the costal border. The technic of this most useful hydrotherapeutic application is clearly set forth in some of our previous lessons in which the various hydrotherapeutic procedures were discussed. The engorged area must be depleted by drawing the bulk of the blood to the lower portions of the body. This is venesection without the loss of blood. The pack should last an hour and be repeated two or three times daily. It should be applied without disturbing the patient. In some cases it is of advantage to make a cold application to the chest while the first pack is being applied. An ice-cap to the head is useful, especially where head- and brain-symptoms are present.

After a pack has been removed, a gentle dry rub-down over the whole body should be administered. In this way the skin is kept active. A local hot application is made for the relief of pain in the chest. If after the first two or three packs the general con-

dition of the patient is improved, the temperature is reduced and the skin appears moist, the pack may be given from the feet to the neck.

Physical and psychical rest is of the greatest importance in cases of this kind.

The bowels should be opened by an enema. Gentle massage of the abdomen should be administered from the right iliac space upward toward the liver, then horizontally across toward the left hypochondrium, then downward toward the left iliac space. In this way distention of the abdomen is prevented and regular evacuations are brought about.

Hygienic Measures.—The air in the sickroom should be fresh and pure, not too cold and not too dry. The room should be well ventilated, the patient being protected against draught. If the room is cold, a grate-fire can be kept up. The temperature should not exceed 70°F. If the air is too dry, a little water in a pan may be placed over a spirit-lamp and slowly evaporated. The inhalation of moisture-laden warm air is a splendid means of relieving cough. The room itself should by no means be allowed to become too moist; about 80 percent of moisture in the air, as shown by the hygrometer, is desirable in cases of pneumonia, especially if the cough is distressing.

Stage of Exudation.—The second stage of pneumonia is mostly feared on account of the condition of the heart. The most common cause of a lethal result is cardiac failure. The arterial pressure is considerable; the strain on the right side of the heart taxes the organ to the utmost. The vasomotor exhaustion is seen in the relaxed peripheral vessels. At this stage the object of treatment is to keep up the heart and to control hyperpyrexia. If the temperature exceeds 103°, a cold sponge-bath should be administered, followed by a dry-rub. The temperature is not reduced by the cold water, but by the increased activity of the skin which radiates heat-units in response to stimulation.

To keep up the heart, the patient should remain in the recumbent posture. Stimu-

lating packs of the lower extremities should be given two or three times daily. A hot application to the feet should be kept up constantly. The skin of the lower extremities should be moist. Occasionally a lukewarm sponge-bath, followed by a dry rub, should be given to the lower limbs. During this stage of the disease, the judicious use of coffee, tea or of alcoholic stimulants in any form is of advantage.

Dry Heat or Ice-Bag, Which Is Preferable?—Recently the employment of intense dry heat (thermic cylinder) has been championed by not a few. Others seem to pin their faith to continuous applications of extreme cold (ice-bags). Skinner speaks well of the effects of dry heat locally applied. Mays, on the other hand, prefers the ice-bag.

"Very often," says he, "it is found that the application of ice to an affected spot is immediately followed by a marked lowering of the temperature and improvement in the physical signs in the part. When we come to compare the results of the ice-cold treatment of pneumonia with those that have been obtained from other forms of treatment, it is safe to say that the former is infinitely more satisfactory than the latter. Cold reduces the pyrexia, strengthens the pulse, tones up the heart, diminishes the pain in the chest, alleviates the difficulty of breathing and gives greater general comfort to the patient. It is capable, however, of doing a great deal more. By virtue of its power to stimulate nerve function and to contract small blood-vessels it promotes the pulmonary circulation, relieves stasis, hastens resolution and disperses the products of exudation."

High Degrees of Heat Are Harmful.

—The choice between dry heat and the ice-bag is clearly a matter of individualization. Neither the one nor the other should meet with unqualified endorsement, although the ice-bag seems to meet physiological indications in a certain sense. The objection to extremes of heat and cold is clear. Both have a tendency to suspend the vital functions in the skin and the underlying tissues. They produce anesthesia by paralyzing the

sensory nerves. The effects of either intense cold or intense heat on the seat of the disease are illusory. If the temperature in the inflamed lung-tissue could be so lowered or so elevated as to destroy the vitality of the pathogenic germs, the tissue itself would be impaired, because life is not possible beyond certain physiological extremes of temperature. Intense heat continuously applied to the inflamed lung (if such could be imagined) would disintegrate the aqueous elements of the blood by coagulating the albumen and by destroying the white corpuscles which are supposed to play the part of phagocytes. That the heart is bound to suffer by aggravation of the local reaction is clear. The thermic cylinder, locally used in pneumonia, seems, therefore, to be of questionable utility. In inflammatory conditions of the pleura its use is productive of good results.

Advantages of the Ice-Bag.—The employment of the ice-bag in pneumonia is less objectionable. It frequently relieves the local symptoms, although its exact physiological *modus operandi* is not quite clear. The suggestions given in Cohen's "System" are worthy of attention and study. "Apply the ice-bag over the dull area, and especially over the advancing edge of the consolidation. If the area is large, use two ice-bags, or even three. Expect to find a distinct local effect (less bronchial breathing and looser râles) on careful physical examination after the ice has been applied twenty-four hours. If fresh areas of consolidation develop, use additional ice-bags; four or even more may be used in a bad case. Correct dosage is as important as it is with drugs.

Apply hot-water-bottles to the feet and legs. In children apply these before applying the ice. Examine the signs twice daily and shift the ice-bags accordingly. If pericarditis is present as a complication, place an ice-bag over the heart. If the temperature is below 99°F., or if the hands are cold or the lips blue, remove the bags for an hour, then replace them and use them for two- or three-hour periods, with one- or two-hour intervals. In severe cases with cyanosis and with rapid, feeble pulse, con-

sider whether leeches would not relieve the right heart. Pneumonia treated with ice within twenty-four hours after the rigor may sometimes be aborted.

Additional Therapeutic Measures.—

Both for the purpose of producing a local antiphlogistic effect and also to relieve pain, cupping by means of a vacuum apparatus is often useful. A small portable faradic battery can frequently render good service in supporting a weakening heart. Mild faradization of the vagus is a splendid heart-tonic. To relieve headache, gentle massage on both sides of the nape of the neck or pressure over the occiput may be resorted to. A moderately cold bath to the face, followed by stroking from the median line of the forehead toward and over the temples on both sides simultaneously is a useful sedative. In case of threatening collapse the hypodermic injection of normal salt solution should be resorted to. During the third stage of the disease (resolution, gray hepatization) the treatment does not differ from the regimen during the second stage. Rest and perfect hygienic surroundings should be enforced throughout. Inhalation of oxygen or ozone is of value in many cases. A liberal constructive diet should be allowed when convalescence has begun.

The therapeutic suggestions pertaining to the treatment of acute pneumonia practically contain the therapy of many allied conditions such as congestion of the lungs, edema of the lungs, hypostatic pneumonia, catarrhal pneumonia, etc. In conditions in which, owing to weak heart-action, blood-stasis occurs in the most dependent portions of the lungs, an occasional change in the position of the patient is necessary.

Suggestions as to Prophylaxis.—There is no doubt in my mind that death from pneumonia in the majority of instances is not due to the severity of the disease *per se*, but to the lack of resisting power on the part of the system. It is especially the heart which does not hold out and goes back on the patient, no matter how robust and strong the latter appears to be. Let me say a word or two on this point. I wish to stimulate thought along lines which are

somewhat removed from the common paths of clinical reasoning. Everybody knows that an alcoholic heart has a poor chance during an attack of pneumonia. Why not go a little farther and examine the possible relationship between other forms of habitual stimulation and a weakening heart? What about our patients who are habitual users of tobacco, tea and coffee? Do they not wear out the reserve-energy of the heart so that the latter may be found wanting when its endurance is mostly to be depended upon?

We Eat Too Much Meat.—Let us go still farther and think of the man who subsists on immense quantities of nitrogenous foods and thus keeps his circulation in a constant uproar. I am not by any means a crank on the subject, but I do think that the excessive use of meat is an ever-present and but seldom suspected menace to health, with especial reference to the tonicity of the heart. Excessive use of meat increases the wear and tear of the heart-muscle. Thus it may be an auxiliary cause of a fatal result when an attack of pneumonia has supervened and is taxing the reserve-energy of the system. I believe it would be good hygienic and economic teaching if we should prevail upon people to eat meat not oftener than three times a week. Let them get their proteids out of vegetables. We know that vegetable albumen is more easily assimilated. There is less tendency toward autointoxication.

I should like some expression of opinion from my readers on the meat-question. I am quite sure that we shall have to revise many of our dietetic notions on meat in the near future. Metchnikoff has more than shaken its position as the principal article of diet for man.

OTTO JUETTNER.

Cinцинати, O.

RESUME OF THE LESSONS

In the "theory and practice" of pneumonia particular stress is to be laid on the fact that the disease produces a congestion of the lungs, which leads to an exudation, which in its turn is absorbed. During all

these stages of the disease the functioning power of the lung is impaired, a fact which reflects unfavorably upon the circulation so that the heart not only has an increased amount of work thrust upon it, since its task of propelling the blood through the lungs has become more difficult, but that it also misses the stimulating effect upon its function which is derived from the normal working of the lungs.

It should not require special notice that with the impairment of the two most vital functions, that of respiration and that of circulation, the entire organism is gravely affected and requires careful attention.

It cannot be sufficiently insisted upon that *we must always treat the condition present rather than the name of the disease*, and this is as true in pneumonia as it is in other pathological conditions. Regarding the claim often made in the last few years, that there is no successful drug treatment for pneumonia, this is only correct in the sense that we do not have a *specific* drug treatment for the disease, as we possess it for malaria or syphilis; it is not correct in the sense that the course of the disease cannot be favorably influenced by drugs. Prof. von Leyden of Berlin, whose beautiful treatise on pneumonia, in "Infectious Diseases" (Appleton's "Modern Clinical Medicine," the American edition of "Die Deutsche Klinik") we strongly recommend to our students for collateral reading, emphasizes the fact that drug treatment is by no means useless in pneumonia, and adds: "Only the fanatics of a drugless therapy absolutely abominate every drug."

We should like to caution against a too-decided depression of the fever in pneumonia. The old idea, especially supported by Schoenlein and by Traube, that fever is not merely a reaction of the organism to harmful influences but marks a curative effort to resist and remove them, has of late years again come to be accepted, and a certain degree of fever is recognized as being salutary rather than harmful. Therefore, while it is proper to moderate excessive degrees of fever, its complete depression is not desirable because it is apt to lead to collapse.

During the entire course of pneumonia the supportive treatment stands foremost. First husband the strength of the patient and increase his resistance; then meet and control the symptoms as they arise, and always keep the old adage in mind:

"Quidquid agis, prudenter agas, et respice finem"—Whatever you do, do prudently, and look to the end.

Alkaloidal Treatment of Influenza.

—Dr. F. F. Attix of Lewiston, Mont., says the following in regard to influenza and its treatment:

"I am inclined to believe that the existing relation between suicide and grip is the result of the depressing action on the part of the toxins of the specific bacilli upon the highly specialized nerve-cells, often resulting in neurasthenia, or in temporary insanity, or in delirium from hyperpyrexia.

"I recall the case of an ex-judge who had a severe attack of influenza, complicated with high fever, delirium, and profound toxemia. I did not realize the importance of elimination then as I do now (thanks to Abbott), and it was nearly ten days before his vigorous constitution won the battle in spite of me. During a greater part of his critical period he would correctly multiply and subtract figures involving millions, in his rambling conversations with himself and with various absent persons. He would plan suicide in detail, and restraint was necessary to prevent him from executing these ideas. I can readily understand how the severe pain and discomfort might influence some temperaments to attempt self-destruction.

"Give calcidin, one to 5 grains, every hour, also 5 to 20 drops of nuclein solution. Aconitine to reduce fever and to equalize the circulation. Strychnine arsenate, "to take up the slack," as a tonic. Atropine to relieve pain and flush the capillaries; quinine arsenate as a tonic. Give one granule of each every thirty to sixty minutes until the temperature falls; when this is accomplished give the same dose every hour or two. 'Clean out, clean up and keep clean' by using calomel, podophyllin, emetine, salines and

the sulphocarbolates 'to effect.' A gargle of sulphocarbolates in solution is very useful. The iron, quinine and strychnine arsenate granule with nuclein is an excellent tonic in the convalescent period. Pilocarpine and veratrine are useful as eliminants in sthenic cases. Calcium sulphide is indicated to saturation where the blood is infected and the bacilli are present in it. Codeine and gelseminine are useful for relieving pain. Cicutine hydrobromide is of value in delirious cases."

Treatment of Influenza.—Dr. I. N. Brainerd, Alma, Mich., says: "Nature, left to herself, cures grip with a sweat and a diarrhea. If that is nature's method, it should be ours. This is my treatment: I give a good purge, and 10 grains of acetanilid every four hours for four doses, and then wait until the next day. Also 2 grains of quinine every four hours for four doses, and then wait until the next day. I have the patient stay in bed, and *fill up* on hot drinks, ginger, etc. I sweat them like rain. The acetanilid will not only sweat them—it will relieve the pain. Don't be afraid of the acetanilid given with quinine. The first day's treatment is repeated on the second day without a physic, if it is needed. It hardly ever is. Continue the quinine in 2-grain doses before meals for a week.

"I know how you feel about the use of acetanilid, but this has been my treatment since 1889, and I am proud of my results. I never saw any untoward effects from acetanilid used as I use it; and I buy my acetanilid tablets (five grains each) in ten-thousand lots; I give ten grains four times a day, and two grains of quinine four times a day. I expect to get marked down for this, but I believe that it is the best treatment."

We do not mark our students down for differing from us in opinion. If you are satisfied that your treatment, in your hands, gives the best results, use it by all means. We do not recommend the indiscriminate use of acetanilid because dangerous drugs must be very carefully guarded and are like two-edged swords. If a simple knife will do the work fully as well, it seems foolish

to run any risks of cutting yourself or your patient.

A good many physicians use fairly large doses of acetanilid, with or without quinine, in grip, and like it. It's a matter of opinion and experience. Personally I do not care to use drugs which certainly have a depressing action, if I can find such without that drawback, especially if they will do the work as well or better than the acetanilid. This drug has always appeared to me to act a good deal like a club. It will "club" the fever down, but not without injury to the organism. I think the treatment outlined in the lessons on Influenza is superior to yours, Doctor.

Influenza: Guard Against Complications.—Dr W. Herington of Green City, Mo., in commenting on influenza and its treatment has the following to say:

"The main thought of the treatment must be elimination. Also supportive measures must be used, and here again we can apply Abbott's rule: 'Clean out, clean up and keep clean.'

"The more prominent complications are diffuse bronchitis, catarrhal and croupous pneumonia, pleurisy, endocarditis, and otitis media. The best way to guard against these is to use every prophylactic measure at our command to prevent them, and if in spite of all these measures we get a complication the only way to treat it is symptomatically. If the fever rises, give aconitine or digitalin. For otitis use calcium sulphide till the patients smell like a sulphide factory (which they are). In a pleurisy use bryonia, etc.

"Saturate the patient with calcium sulphide and give nuclein. The sulphide kills the bacillus and nuclein reinforces the leukocytes. Overcome debility with strychnine arsenate, relieve pain with hyoscyamine. Aconitine is indicated for fever, and veratrine to help out with elimination. Emetine for a respiratory stimulant. Keep all eliminating organs active and put your patients on good, nourishing, easily assimilable food, and this will carry all through to health and happiness."

That's the idea, Doctor. Elimination and support. Meet all symptoms and compli-

cations at their beginning and you will succeed. But it is not as easy as it sounds. The cleaning out and supporting are generally simple enough. It is the complications which may cause trouble. In order to meet them you want to know what they are, and how they declare themselves in their incipency; then of course you want to know how to handle them. It all takes a lot of study and work. But it's worth it.

When to Give Quinine and When Not to Give It.—Dr. John Stuart, Monon, Indiana, has the following to say in his answers to the questions on Part 3, Lesson 4:

"It is a fundamental principle that quinine should not be given unless the skin is moist, the tongue moist, and the secretions are open. If the skin is dry, the tongue parched and the bowels are locked up and loaded, quinine will intensify the evil. Observe the above conditions, and quinine may be given at any time. The fad used to be quinine, quinine. The fever would be checked but would soon return. Quinine is an anti-periodic and has its place when periodicity exists. Keeping in mind the principles given above, the time for exhibiting the drug is clear."

The Chill of Severe Malarial Fever.—"I have used for several years acetanilid, drs. 2; piperine, grs. 12," says Dr. Stuart. "Grind the piperine to a fine powder and mix thoroughly with the acetanilid. The dose is five, six or seven grains. The chill is gone in short order. This prescription has never failed me. Till I find something better I shall stick to it."

A Method of Giving Quinine.—W. E. Bremser, St. Louis, Mo., says: "I should like the whole family to know that when bisulphate of quinine in 15- to 60-grain doses is dissolved in epsom-salt solution and applied to any part of the body in malaria it acts like a shot and beats the hypodermic method in the treatment of malaria. I have used it often, especially when the stomach will hold nothing."

Good! That's a practical point. I wonder whether the epsom salt increases the solubility of the quinine salt or the power of the skin to absorb it? Have any mem-

bers of the class ever used quinine that way? If so, please let us know about it.

Malarial Neuralgia is handled as follows by Dr. W. F. Barron of Carmona, Texas:

"I treat it with small combined doses of quinine arsenate, gelseminine, quinine hydroferrocyanide and strychnine arsenate. If the pain is very severe I rapidly increase the gelseminine to effect or resort to small doses of morphine hydrobromide if needed. I also bathe the parts affected with epsom salt, oz. 1; carbolic acid, min. 10, and hot water, one pint."

Malaria.—Dr. A. Graves of Mehama, Alaska, meets various indications in malaria in this manner:

"My plan of treatment for the intermittent type of malarial fever: If I get there for the first stage (the chill), I give chloroform inhalations, hypodermic of H-M-C or morphine and atropine, or in the absence of these a cup of pepper or ginger tea, and in addition put bottles of hot water to the feet and legs.

"For the febrile, or second, stage, I have found nothing that quite equals the acetanilid compound commonly known as migraine compound. Of this I give 5 grains every one-half to one hour till nervous symptoms and fever are ameliorated.

"To prevent another paroxysm, I begin soon after the fever has gone down with calomel, 1 grain; podophyllin, 1-4 grain; ipecac, 1-8 grain, hyoscyamus, 1-8 grain; one such dose is given every one-half hour till six or eight doses are taken. Four hours after the last dose I give saline laxative to effect. About twelve hours before the time for the next chill I begin with quinine sulphate, grs. 5, and capsicum, grs. 2, in capsules, giving one such capsule every three hours till after chill-time. If the chill is "missed," I direct three grains of quinine to be taken three times a day before meals, and a good dose of 'salts' every morning or two, for a week.

"In remittent cases, the 'clean-out' method used in the intermittent cases is indicated, and this is repeated every few days, though usually in small quantities. The

dose of quinine and capsicum mentioned above is given every four hours, and sometimes I double the quantity of quinine while the fever is low; sometimes I omit a dose when it is at its highest. As a febrifuge I never employ the acetanilid compound in these cases (sometimes an occasional dose to combat nervous symptoms), but the defervescent granules are given one every ten to fifteen minutes to effect. I frequently employ potassium citrate or acetate as a diuretic, and also use strychnine and digitalin if indicated, and not infrequently they are. Salol or the sulphocarbolates as intestinal antiseptics are indicated throughout the febrile course. For convalescence I use elixir of iron, quinine and strychnine. I have had no experience with quinine arsenate, but think I'll give it a trial during the coming malarial season."

"Bad" or "Congestive" Chills.—

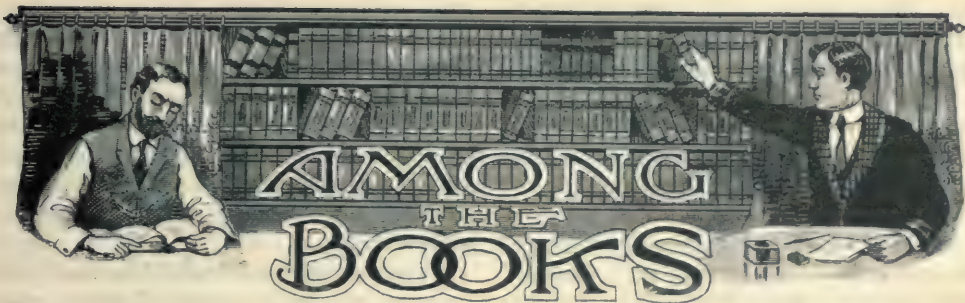
The same writer advises as follows: "Get busy at once and get everybody else busy. Give a hypodermic of H-M-C, or of morphine and atropine. Direct the attendants to 'fill' the bed with bottles of hot water, hot bricks or stones. Give by the mouth such reflex irritants as capsium, camphor, cajuput, ether, alone or in combination, also strychnine, preferably by the hypodermic route and combined with glonoin and hyoscyamine, frequently repeated till the peripheral circulation is well dilated. Nor is this all, in fact it is not the main part of the treatment for severe chills. Specific and eliminant remedies must be started, and at once. Give twenty to thirty grains of quinine bisulphate or hydrochloride hypodermically every four hours till the patient is thoroughly cinchonized; then continue with half the quantity by the mouth every four hours till well after the next chill time. I like potassium acetate or citrate with oil of turpentine to stimulate kidney elimination. As to purgatives, it is here that I give big doses. I take fifteen or twenty grains of English calomel, divide into three doses, add half a grain of may-apple (*podophyllum*) to each dose, and give one every two hours, following up with magnesium sulphate till the bowels are well cleaned out.

"The comatose condition of malarial fever is not due to 'congestion' as was once thought and for which the back of the head was shaved and a fly blister applied, but to a paralytic condition of the brain-cells due to malarial toxemia. My treatment is quinine, with purgatives and diuretics, and strychnine sulphate, together with hot baths, and defervescent granules if the fever gets high.

"I make a saturated aqueous solution of the quinine, and I generally use the bisulphate or the hydrochloride, and to the solution I add sufficient table salt to make it a "normal salt solution." After making aseptic preparations, I take enough of the solution for the desired dose, usually fifteen to thirty grains with a syringe large enough to hold the dose inject it deeply into the muscular tissue, usually that of the gluteal region."

EXAMINATION QUESTIONS

1. What is the definite cause of pneumonia? Give historical data.
2. What are the contributory or exciting causes? What do they suggest therapeutically?
3. What is the significance of the urinary findings?
4. Describe the blood picture in pneumonia. What does the leukocyte count show, as to prognosis and therapeutic indications?
5. Outline the general management of a case of pneumonia. (Not more than one hundred and fifty or two hundred words.)
6. Describe briefly the alkaloidal and the physical forms of treatment. Give your own method.
7. Describe briefly cases at the extremes of life, successfully treated, if any, in your own practice. Give the treatment employed.
8. Can pneumonia be aborted? Give your own opinion on the question, and support with reasons and facts from your experience.
9. Give hydrotherapeutic treatment for onset of an attack of pneumonia.
10. What are the most frequent complications and how do you treat each?



OSLER'S "PRACTICE OF MEDICINE"

The Principles and Practice of Medicine. By William Osler. Seventh edition, thoroughly revised. New York and London: D. Appleton & Co. 1909. Price \$5.00.

Dr. Osler's work on the "Principles and Practice of Medicine" is too well known to require much comment. It has been for many years a reference-book for the general practitioner, for whom it was designed; tending to afford the essential results of the extensive investigations constantly carried on in clinics and laboratories here and abroad. The present edition is distinguished from its former ones by embodying recent discoveries and acquirements, especially in the important chapter of infectious diseases. It gives a review of the progress made in syphilography, in our knowledge concerning pneumonia, epidemic cerebrospinal fever, the results of the last International Tuberculosis Congress, and so forth.

KNOPF'S "TUBERCULOSIS"

Tuberculosis a Preventable and Curable Disease. By S. Adolphus Knopf, M. D. New York: Moffat Yard & Co. 1909. Price \$2.00.

Dr. Knopf is well known, not only to the medical profession but to the public, by his numerous contributions to the tuberculosis literature, and in this he has for many years devoted himself more especially to the prevention or prophylaxis of the disease.

The little volume just from the press presents in clear and simple language the most important principles to be followed in the

prevention of the disease. But the author also gives valuable advice to the consumptive himself and to those having his care. To quote from the preface, the book is intended to be helpful first to the patient—but not with a view to replacing the physician, for no book can replace the experience and judgment of the experienced physician. The book is intended to help those living with the tuberculous, showing that a clean, conscientious consumptive who is careful in the disposal of his sputum and the prevention of droplet infection is as safe an individual to associate with as anybody else, and that phthisiophobia is unjustified, cruel and inhumane.

To the physician and nurse this book gives valuable hints in the management of tuberculous patients; to the hygienist and sanitarian, and, finally, to municipal and health-authorities, to employers, and in short to all who are likely to come in contact with consumptives, the volume offers assistance and information.

We would commend especially Dr. Knopf's emphatic condemnation of the unreasonable phthisiophobia, or excessive fear of tuberculous infection, which is perhaps an unavoidable consequence of the campaign of education physicians and sanitarians have been engaged in for many years in order to teach the public the contagious nature of tuberculosis. The fact that tuberculosis is communicable from person to person does not, however, mean that a simple contact with patients, as in scarlet-fever or diphtheria, is sufficient to determine an infection. For that prolonged and intimate contact with consumptives is required. Consequently,

while the greatest care is necessary to prevent the further distribution of tubercle bacilli, it is wrong to ostracize consumptives on account of their condition.

COOLING'S "COMPARATIVE MYTH- OLOGY"

The Science of Comparative Mythology. By Walter Freeman Cooling, B. A., LL. B. Published by The Promethean Society. Chicago. 1909.

This is a brochure of some one hundred pages intended as a prospectus to an illustrated work in four volumes, and to be sold by subscription only. The price for the first set of two volumes, already in press, is given as six dollars. This prospectus gives the table of contents of the first two volumes, each one divided into four parts, and the titles of the parts and paragraphs reveal a fund of subjects to be discussed which has always interested and which must now more than ever interest the thinking minds of the human race; the reviewer thinks such minds show a large percentage in the medical profession who ought to be eager readers of this prospectus, and ultimately of the work itself. The author is a highly educated scientific and classical scholar—not a badly self-made man but a scholar who does not swear by the words of masters nor steps in their very footprints.

The author endeavors to show that myths are the fossil vestiges in the memory of the race of a matured system of science which prevailed among the men who lived in the tertiary epoch before the great change of climate upon the entire globe. This was the platycnemic race (with flattened shin-bones), our antediluvian ancestors, who attained to vast longevity.

The reader who cannot agree with Mr. Cooling's deductions will nevertheless be profited quite as much from the mass of information which is brought up for discussion as will the one who perchance agrees with him on all points. This work of the author is the product of decades of thinking—thinking deeply, freely and altogether originally. It is not a hackneyed ex-cathedra

work with a university faculty to back it, but it is a far better extra-cathedra work which reviews, analyzes, and discriminates freely thoughts which the *hoi polloi*, both of orthodox and heterodox so-called progressives and conservatives, semithinkingly accept as law and gospel or just because they are "Scientific" (with a big "S") and against both of these.

Together with this pamphlet (sent for 50 cents) goes a supplement of sixteen pages under the title, "The Philosophy of Comparative Mythology," by the same author, which is replete with thought-provoking matter.

FOX'S "OPHTHALMOLOGY"

Ophthalmology. A Practical Treatise. By L. Webster Fox, M. D., LL. D., of the Medico-Chirurgical College, Philadelphia. With 6 colored plates and 300 illustrations in the text. New York and London: D. Appleton & Co. 1910. Price \$6.00.

This volume is neither a reprint nor a second edition of "Diseases of the Eye," by the same author and the same publishers, which appeared in 1904. The science and practice of ophthalmology is advancing in the same degree as all the other departments of the healing art, and hence there has been much progress during the last six years. The general practitioner as well as the specialist will find Dr. Fox's "Ophthalmology" a satisfactory work for reference as well as study.

CAMBELL'S "TREATMENT AND FOR- MULARY"

Hand-Book of Modern Treatment and Medical Formulary. A Condensed and Comprehensive Manual of Practical Formulæ and General Remedial Measures. Compiled by W. B. Campbell, M. D. Detroit: F. A. Davis Company. 1909. Price \$2.00.

The arrangement of the subject-matter of this book alphabetically according to disease-names followed by appropriate prescriptions is excellent for ready reference. We can confirm what the author says of his

book: "Its use in busy moments and its careful perusal in leisure hours will add to the practitioner's efficiency and usefulness."

McINTOSH'S "MEDICAL ELECTRICITY"

Practical Handbook of Medical Electricity for Students and Practitioners. By Herbert McIntosh, A. M., M. D. Boston, The Therapeutic Publishing Company, Inc. 1909. Price \$3.00

An excellent treatise on the theory and practice of electricity in its therapeutic application. The first part of the book, covering more than 300 pages, deals with the physics and physiology of electricity, and describes the apparatus as well as its mode of application. The remaining pages are devoted to the therapeutics of electricity, and consider the electric treatment of diseases of women, diseases of the genitourinary organs, rectum, nose and throat, eye, lungs, and ear, etc. The book is well illustrated and fully indexed.

ABBOTT'S "BACTERIOLOGY"

The Principles of Bacteriology. A Practical Manual for Students and Physicians. By A. C. Abbott, of the University of Pennsylvania. Eighth edition, thoroughly revised. With 100 illustrations, 26 in colors. Philadelphia and New York: Lea and Ferbigier. 1909. Price, \$2.75.

This book always was and continues to be excellent in arrangement, succinct yet comprehensive in statement. The author has added, in this edition, a chapter on infection and immunity.

SIMON'S "CHEMISTRY"

A Manual of Chemistry. A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A textbook specially adapted for students of medicine, pharmacy, and dentistry. By W. Simon, Ph. D., M. D., of the College of Physicians and Surgeons of Baltimore, and Daniel Base, Ph. D., of the University of Maryland. Ninth edition, thoroughly revised. With 78

illustrations, one colored spectra plate and eight colored plates representing 64 chemical reactions. Philadelphia and New York: Lea & Ferbigier. 1909. Price \$3.00.

We have given the title page of the book in full so that the reader may form a conception, however inadequate, of the value of the book for him. We must warn, however, against accepting in full the words, "for beginners" in chemistry. This seems an expression dictated by the author's modesty. The book may serve the educated physician perhaps a life-time, to refer to, to refresh the memory on points in chemistry, which is not his everyday work. A physician's library must have a physician's chemistry, and a better one than Simon's he will not find.

KER'S "INFECTIOUS DISEASES"

Infectious Diseases: A Practical Text-Book. By Claude Buchanan Ker, M. D. Henry Frowde, Oxford University Press, London and New York. 1909. Price \$7.00.

He who has laboriously worked his way through almost any one of the numerous treatises on bacteriology, immunity, and infectious diseases will be pleasantly surprised at the concise and lucid manner in which Dr. Ker has handled these difficult subjects in the book before us. We have never read so instructive and withal so simple a description of the theory of infectious diseases as that given in the introduction of only twenty pages. The author takes up and discusses briefly the principles of infection, toxins, immunity, in a manner to make these difficult subjects clear to the practitioner, yet without burdening him with the technical detail which the bacteriologist needs. Unfortunately, the subjects of bacteriology, infection, immunity, etc., are far from being closed chapters and the technical treatises are rendered unduly difficult by the fact that the terminology is by no means uniform.

The author takes up the various infectious diseases, beginning with the acute exanthemata and going on to typhoid fever, diphtheria, etc. The theory of the diseases

is given in a beautiful manner which aids greatly in their proper understanding and recognition. The chapters on treatment are well written and contain, as a matter of course, far more on the management than on the medicinal treatment.

The writer of this review was much interested in what the author has to say on the internal use of antiseptics and of calomel in enteric fever. Regarding the former we read on page 329, "We may reasonably expect to secure a considerable antiseptic action on the contents of the bowels, and to delay and check putrefactive processes which, uninterfered with, might lead to the production of gas and the subsequent development of meteorism. *It is possible also that a suitable general antiseptic might check the multiplication of the typhoid bacillus in the blood itself, if, indeed, any growth takes place there.*" (Italics ours.) Concerning calomel, Dr. Ker says (p. 330): "So far as I can judge, calomel, in doses of three grains, empties the small intestine into the large. If the large intestine is not irrigated, or an enema is not given, a motion cannot always be counted on. The time to give this irrigation is not later than seven hours after the dose has been taken. The object with which the calomel is prescribed, in what might be called purgative doses, is to prevent any stagnation of fermenting material in the ileum. The drug has also a considerable antiseptic action on its own account, and it has been proved to limit the multiplication of the organisms of putrefaction in the gut."

The book is fully and beautifully illustrated, the colored pictures of measles and scarlet-fever being especially fine. We recommend its careful study to the practitioner, who will derive much valuable information presented in an attractive manner.

MUMFORD'S "SURGICAL MEMOIRS"

Surgical Memoirs, and Other Essays. By James G. Mumford, M. D. New York: Moffat, Yard & Co. 1908. Price \$2.50.

An interesting contribution to the historical study, not only of the lives but of the

struggles, investigations and endeavors of great surgeons, from Hippocrates and Galen down to Lord Lister. The American surgeons are considered together in a separate chapter. Books like the present fortunately are becoming more numerous in our national medical literature, largely through the efforts of Professor Osler, and we would emphasize the fact that a careful and sympathetic study of the history of medicine will help us not only better to understand the problems of today but to become better physicians ourselves. The book is well worth the reading.

WILSON'S "MEDICAL DIAGNOSIS"

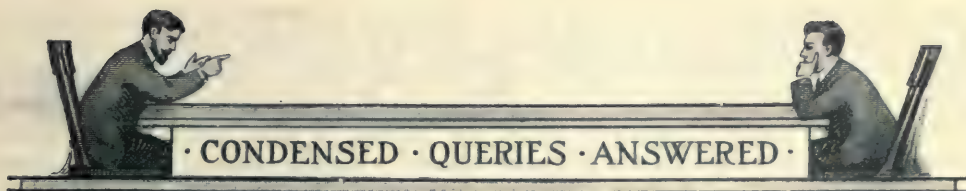
A Handbook of Medical Diagnosis. For the Use of Practitioners and Students. By J. C. Wilson, A. M., M. D., of Jefferson Medical College, Philadelphia. With 408 illustrations in the text and 14 full-page plates. Philadelphia and London: J. B. Lippincott Company. 1909. Price \$6.00.

This large work is divided into four parts, namely, medical diagnosis in general, methods and immediate results, symptoms and signs, and clinical applications, comprising all told more than 1400 royal-octavo pages. The plan of this treatise is somewhat novel, and it may require some study to become familiar with it. But when anyone in active practice feels a real desire to be a good diagnostician this book and its plan will become a most excellent working instrument in his hands.

MUIR'S "IMMUNITY"

Studies on Immunity. By Robert Muir, M. A., M. D., University of Glasgow, in Collaboration with C. H. Browning, M. D., A. R. Ferguson, M. D., and Wm. B. M. Martin, M. B., Ch. B. London and New York: Henry Frowde, Oxford University Press. 1909. Price \$3.00.

This is a collection of papers published in various medical journals arranged in connected book form. At some subsequent day this book will be useful as a documentary reference to the doctrines of immunity.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5550.—“A Case of Gonorrhea.” J. W. H., Washington, is treating a young man of twenty-six, who has been infected for three months. “There is no pain or present discomfort. Appetite good, no fever, no urging to urinate. Discharge is a thick pus. The doctor is satisfied the lesion is in the posterior urethra. He has injected thymol iodide twice daily for two weeks and used three bougies. The patient is discouraged and so is his physician.”

You give a very limited description of the conditions present in your gonorrhea patient. Chronic posterior urethritis is a stubborn condition at best. It sometimes baffles even the most skilful practitioner.

Examine the lacuna magna and, if there is any sign of infection, with a blunt-pointed hypodermic needle inject a few minims of peroxide of hydrogen, wash out with boric-acid solution, dry with a few pledgets of cotton on a probe, then with a broom straw dipped in carbolic acid enter the sinus, being sure to touch the walls in every direction. In a few minutes neutralize with another straw dipped in alcohol. Two or three such treatments will usually prove curative. If there is a cowperitis you will have more trouble, and the treatment will be rather prolonged.

In all these cases it is absolutely essential to get at the underlying pathological conditions and push internal and local treatment conjointly. The writer has seen in consultation numberless cases which have failed to yield to weeks of medication and has dis-

charged the patients cured within ten days. In such instances there are usually eroded areas in the deep urethra. The parts must be rendered aseptic and silver nitrate or protargol applied direct to the patch. Mitigated citrine ointment occasionally proves the most effective remedy.

Send a specimen of urine, taken by the three-glass method first thing in the morning, to the laboratory. You are, of course, familiar with the technic? We shall then be able to locate the seat of infection. Examine the prostate also and obtain (by milking the gland) a specimen of prostatic fluid. This should accompany the urine. Internally methylene-blue, formin compound, and calcium sulphide to *saturation*, are usually essential.

In uncomplicated “gleets” the urethra may be irrigated with a solution of thalline sulphate, or you may use mercury bichloride, 1-2 grain, peroxide of hydrogen, 3 ounces, distilled water, 16 ounces, for a few days, and then thalline sulphate, gradually increasing the strength of the latter solution. Don’t forget the value of copper electrolysis.

QUERY 5551.—“Periodical Enlargement of Abdomen.” A. L. S., Oklahoma, describes the condition of a married woman, aged 22, whose enlarged abdomen suggested pregnancy but which suddenly returned to natural size. Her health is fairly good, she eats heartily, but is afflicted with dysmenorrhea. She was treated for ascites, and the symptoms soon disappeared, the abdomen

being reduced to normal size, but in about twelve hours it again was as large as ever. There is some tympany on percussion; no sounds on succussion.

Examine this patient's urine thoroughly, also make a careful examination of the pelvic organs and report the findings. Outline the area of the colonic tympany when the abdominal conditions are normal. How frequently does this enlargement occur? Is its subsidence marked by the passage of large quantities of flatus? As we understand, perfectly normal abdominal conditions obtain at times. What is the extent of the enlargement from the ensiform cartilage to the pubes, or from the lower margin of the colon only? What is the character of this woman's stools? Is she hysterical, a "wind-swallower?"

The use of intestinal antiseptics and digestives with juglandin and strychnine possibly may prove effective. The patient should also wear a snug abdominal belt.

QUERY 5552.—"The Delusions of a Cocaineist." M. E. S., Ohio, desires us to inform him if there is any modern work dealing with the cocaine habitué, defining his delusion, etc.

We are not aware that any work outlines fully the "delusions of the cocaine addict;" the book which will most likely serve the purpose is Crother's "Diseases of Inebriety."

Naturally the conditions presenting themselves depend very much upon the dose of cocaine taken and the individual. Excessive dosage causes total unconsciousness, the patient first of all passing into a delirious exaltation, hearing bells, seeing bright lights and feeling as though he were floating in a sea of rosy clouds. Under such circumstances he will jump from a window, throw chairs or other heavy articles into the air, and do the most desperate acts, then falling suddenly prone to the floor and remaining unconscious for anywhere from one to ten minutes.

Cocaine, we know, is very rapidly eliminated from the body, and the effect of an overdose passes away in a few hours. One addict, a refined and delightful gentleman,

kept his wife up the entire night backed up against a wall with a pistol in one hand and operating knife in the other, accusing her (the most devoted and faithful of women) of having "a man hidden in the clothes-closet." As the effect of the drug passed away he would relent, weep and assure the unfortunate woman that he would not hurt her under any consideration. Then he would march over to the mantelpiece and shoot in another grain or more of cocaine, instantly returning to take up the old position and reiterate more fiercely than ever his charge of harboring a lover. This pleasant procedure went on until daylight, and the unfortunate woman was an abject object when members of the family finally came in. The man was easily disarmed and put to bed and the wife nursed him patiently and devotedly all day long. Toward evening he was out and about in his buggy and no one had the faintest idea of the horrible things going on in the home. A week or two later this man so misconducted himself in a hotel (under cocaine influence) that he was given the choice of committal or treatment. He came under the writer's charge, never took another dose of drug and is to-day a shining light in his profession and worth easily fifty or sixty thousand dollars.

His use of cocaine began with the application of the drug in an inflamed ulcerated tooth. He has often stated that his sensations when under the influence of cocaine were too exquisitely delightful to be described in ordinary words. BUT—and he said this "but" has to be considered—the horrible discomfort experienced as the effect of the drug faded away also beggared description. He was shivering one moment, burning up the next, tremors shook him from head to foot, perspiration streamed from the pores, saliva from the mouth and serum from the nose; the heart leaped and pounded, vision was blurred and a sense of impending dissolution oppressed his senses. All these horrors disappeared within a minute after the injection of a reasonable dose of cocaine, but (as he expressed it) the next thing was an "unreasonable" dose; then more, and still more, till oblivion ensued. Once the

after-effects had passed off there was no real craving whatever for the drug, and each time he used it he knew what the results would be and hated himself even as he gratified the desire to experience once more "those remarkable feelings."

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 QUERY 5553.—"Psoriasis." F. R., South Dakota, is treating a mild case of psoriasis in a girl of nineteen, the outbreak being confined to the elbows and the knees around the kneecaps. About three times as much urea is excreted as normal and the urine is perhaps more acid than normal. There is no indican, sugar or albumin; the solids excreted are normal. Our correspondent asks: "What does the abnormal amount of urea indicate and what treatment does it call for? Is there anything better, for local use, than carbenzol?"

An increased output of urea evidences increased tissue destruction. As you know, the greater portion of nitrogen taken with the food is excreted as urea; hence retrograde tissue metamorphosis and malassimilation of nitrogenous foods influence the elimination of this constituent of the urine. From 20 to 40 Grams (300 to 600 grains) may be excreted by a healthy man during twenty-four hours. Women excrete less urea than men. The mean average excretion of a healthy man is between 20 to 40 Grams, say, 500 grains.

Caffeine, ammonium chloride, potassium chloride, morphine, codeine and lithium carbonate will cause increased excretion of urea. The application of electricity increases the output. Diabetes, dyspnea, anemia, scurvy, epilepsy, gastrointestinal disorders, all increase the output. We are not surprised, therefore, at the urinary conditions in this particular case, for psoriasis rarely exists where the body-chemistry is normal.

Cleanse the affected areas thoroughly with soft (green) soap, adding five minims of a 40-percent solution of formalin to each ounce; then apply carbenzol or ichthyol. If you have a leucodescent or similar lamp, treat the affected areas therewith and rest assured of results. An ointment of ammo-

niated mercury or eugallol also is efficient. We need not call your attention, we think, to the necessity of maintaining a thoroughly active and clean intestinal tract. Give frequent sponge-baths, using a carbolated solution of magnesium sulphate (1 ounce to 2 quarts) and order a light mixed diet. Salt and smoked meats or fish are tabooed. Iridin, stillingin, rumicin and alnuin are efficient remedies; arsenic sulphide may be pushed to effect. The main thing is to secure proper nutrition without throwing excessive waste into the system. The bile salts and calcium sulphocarbonate have proven useful in the writer's practice.

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 QUERY 5554.—"Gelsemin and the Shaller Rule." E. L. M., Missouri, asks: "Can we give gelsemin (gr. 1-134) by the Shaller rule?"

Gelsemin, which is a concentration, may be given in larger doses than gelseminine, the alkaloid. The "Shaller rule," as a matter of fact, *applies to aconitine*. Usually we give much larger doses of the latter drug. One granule of such alkaloids as aconitine, veratrine, gelseminine, cicutine, etc., may be dissolved in 10 teaspoonfuls of water, and a half to one teaspoonful given at half-hourly or hourly intervals. We do not hesitate to give even larger doses than this when the necessity arises. Extreme care is necessary, of course, only where the medicine possesses (in large doses) toxic properties and the attendant is unable to recognize evidences of drug sufficiency.

Gelsemin is a concentration containing both the two active principles of gelsemium, and in the estimation of some clinicians more nearly represents the therapeutic efficacy of the drug. Note Shaller's article on aconitine dosage in this journal for last January.

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 QUERY 5555.—"Irritable Vesical Sphincter." W. M. G., Pennsylvania, requests that we give him suggestions for the treatment of an irritable condition of the neck of the bladder of such severity that it is difficult for the patient to control the sphincters, this being due to an old specific ure-

thrititis. The patient complains of a burning sensation upon passing urine.

We could easily prescribe at random, but the success of the positive therapist is largely due to the fact that he "diagnoses closely and gives the right remedy for the condition present in small repeated doses to effect. We would, therefore, ask you to give us as clear a clinical picture as is possible, accompanying this with a specimen of urine taken by the three-glass method or, if this be impracticable, send a 4-ounce specimen from the entire amount passed in twenty-four hours, stating the total amount voided. Our pathologist will examine it, when we can prescribe more intelligently.

In the meantime, if the urine is alkaline, push ammonium benzoate with arbutin, using strychnine and hydrastin as alternants for their tonic effect. If there is hyperacidity, give lithia, using the other remedies mentioned at the same time. An oil solution of thymol iodide should be injected into the deep urethra every third day, while an enema of decinormal salt solution three times a week will, we think, prove beneficial. Is the prostate involved?

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 QUERY 5556.—"Orchitis. Enlarged Prostate." A. D. A., Connecticut, asks: "What would you give for orchitis, not venereal, or, if venereal, the cause. Also for enlarged prostate."

Inflammation of the testicle (orchitis) may follow mumps; it may also be of traumatic origin or spontaneous. It seems syphilis can be excluded. Are you quite positive that there has not been a gonorrhea? Primary orchitis is rare, the secondary variety being usually met with. Now and then an orchitis is seen without discoverable cause. Excessive venery and ungratified sexual excitement may cause more or less orchitis. Pain and swelling in such instances are evanescent. The local symptoms of orchitis are too well known to need description.

The general symptoms may be severe chills, fever, nausea, vomiting, hiccoughs, sleeplessness, and great nervous irritability. The main treatment in all cases is rest in

bed, support of the testicle and the application of guaiacol. The writer applies guaiacol freely, and then hot compresses wrung out of a solution of magnesium sulphate, supporting the testicles and dressing with a wide band passed around the thighs.

Internally small doses of aconitine, veratrine and cicutine may be ordered if the temperature is above normal. Phytolaccin, iridin and anemonin may be given in fairly full dosage every three hours, with calx iodata, 1 grain every four hours. Extreme pain may be controlled by the use of hyoscine, morphine and pilocarpine. If the slightest sign of pus formation shows push calcium sulphide (gr. 1-6 hourly), and puncture at the first sign of fluctuation. In the earlier stages results sometimes follow saturation with pilocarpine. The drug should be pushed with the other remedies suggested until the patient perspires freely. Omit twenty-four hours and repeat.

The treatment of prostatic hypertrophy varies according to the type of congestion present. In the ordinary congestion encountered in men under forty or thereabouts the use of suppositories containing ichthyol or carbenzol with hydrastin and atropine proves effective. Applications of thymol iodide in oil through the urethra, together with the use of collinsonin, hydrastin and phytolaccin internally, usually aid materially.

In the fibrous type (senile prostate) more radical measures are called for. You should read Candler's article which appeared in CLINICAL MEDICINE for April, 1908.

If you will give us a clear description of any particular case you may have under treatment we shall be only too pleased to suggest further. The value of the galvanic and faradic current in all prostatic congestions must not be forgotten. It should be born in mind that dilation of the anal sphincter proves beneficial in practically every instance.

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 QUERY 5557.—"Books on Massage." A. C. W., Illinois, inquires as to what book or author we should recommend where one wishes to inform himself on the subject of massage and perhaps to use it in his practice.

One of the most simple and satisfactory publications, in our estimation, is "Practical Massage in Twenty Lessons," by Harvig Nissen. The price is \$1.00. Another extremely useful book which we are sure will be found well worth studying is "Massage Treatment in Diseases of Women," by Ziegenspeck of Munich; Westerschulte of Chicago is translator, and Frank Betz, we believe, the publisher. It is sold at \$1.00. You might, under the circumstances, address Dr. F. H. Westerschulte for further information relative to recent literature on massage.

Though massage is unquestionably useful the physician can rarely apply it satisfactorily. He has neither time to acquire proficiency nor to give treatments. Moreover, the modern vibrator is so easily obtainable and the effects of vibration are so superior to those secured by massage alone that we suggest the study of vibration. The osteopaths (as you say) do some good work, chiefly because they diagnose closely and use a few rational procedures.

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 QUERY 5558.—"The Old Aconitine Question Again." G. R. R., Michigan, writes as follows: "If called to an adult with fever and it is desirable to give aconitine alone or in combination, how do you give it? In solution always, or do you tell the patient to swallow the granules with water? If a granule gets lodged in the throat and aconitine-effect results, how do you relieve the tingling?"

Under the conditions described it is desirable always to clean out first the intestinal canal and so stop autointoxication as rapidly as possible. Do not give aconitine for "fever" until you have taken such steps. For instance, you have an infectious disease to deal with, the temperature 103°F., skin hot and dry, pulse quick and bounding. You will order small doses of calomel and podophyllin every half hour for four to six doses, beginning this medication at once and ordering a saline laxative draught one to two hours after the last dose. You will also order sodium, calcium or zinc sulphocarbonate (alone or combined), with plenty

of water, every two or three hours in order to secure a therapeutically clean intestine. In this manner you put the system in the best condition to overcome the disturbing toxins and prevent further poisoning from the alimentary canal.

The early administration of aconitine (or aconitine, digitalin and veratrine together) is of course desirable, so you either order a granule hourly with a swallow of water for three to six hours, or make a solution of, say, 6 granules (1 granule to 4 teaspoonfuls of water) and order a teaspoonful half-hourly to effect or until tingling of the throat and other signs of aconitine sufficiency are present. This dosage is for an adult. Children require weaker solutions, the dosage depending upon age and conditions, as determined by the dose-table.

Where the patient or nurse is of a low order of intelligence simply leave a *safe maximum* quantity of a solution of aconitine (this rule applying to any toxic alkaloid), that is to say, such a total quantity as cannot prove injurious if consumed within a given number of hours, and of this order one teaspoonful half-hourly or hourly until the skin cools and moistens, or until 20 (or whatever number you decide on) doses have been taken. Here the worst that could happen is that the patient should receive a few more doses than necessary. Remedial effect might follow the fifteenth dose or even the twelfth, but the additional medication will certainly not prove injurious in such cases, provided again that you leave a safe total quantity of solution.

On the other hand, if the medicine is all consumed and the desired effect not secured by the time the patient has been cleaned out, had the intestinal tract rendered practically aseptic, and received a rational amount of the indicated medicine, it is certainly time for the doctor to revise his treatment. In the early stage of any acute disease the physician should see his patients at least once daily. In nine cases out of ten on your return (even in so-called unfavorable cases) you will find a marked improvement, and will only have to push "the right remedy" for a short time to secure

curative results. But, Doctor, "perfect results only follow a perfect technic," and in order to do definite things we must have, first, a clear idea of the pathologic conditions present and, secondly, a lucid conception of the physiologic action of the drugs we prescribe to correct them. To give aconitine for fever without securing elimination would be a therapeutic absurdity.

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 QUERY 5559.—"Chronic Urethritis." C. W. L., Ohio, has a case of gonorrhea of more than two months' standing. He has used bougies for a while, injections of protargol, ichthyol, carbenzol, and so on. There is observed a little discharge each day. He thinks of trying dilation, and asks advise in general.

It is best to send a specimen of the discharge to the laboratory so that we may know something more about the condition. Touch the slide to the meatus, rub it and the cover-glass together so as to spread the discharge, dry by waving over an alcohol lamp and glue the edges together. There may be an infection of the lacuna magna or eroded areas in the deep urethra. Gleets are not often cured by empirical treatment. Injections of a solution of the sulphocarbolates, 10 grains to the ounce, 1-2 dram of glycerin being added, often prove effective in uncomplicated cases. Such injections should be made three times daily in the usual manner. Twice a week 20 to 30 minims of a 10-percent solution of thalline sulphate in sterile oil may be injected carefully.

Internally administer calcium sulphide, hydrastin and collinsonin every three hours, adding, in some cases, methylene-blue three times daily. See if there is any enlargement of the prostate. Be sure and keep the patient's bowels open with saline laxatives and the kidneys active.

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 QUERY 5560.—"Why Disinfect the Bowel in Typhoid?" J. H. H., Pennsylvania, asks why we think disinfecting the bowels in typhoid fever aids in the recovery of the patient? "They teach us at Jefferson," he says, "that intestinal antiseptics are of

no use whatever in the treatment of typhoid fever."

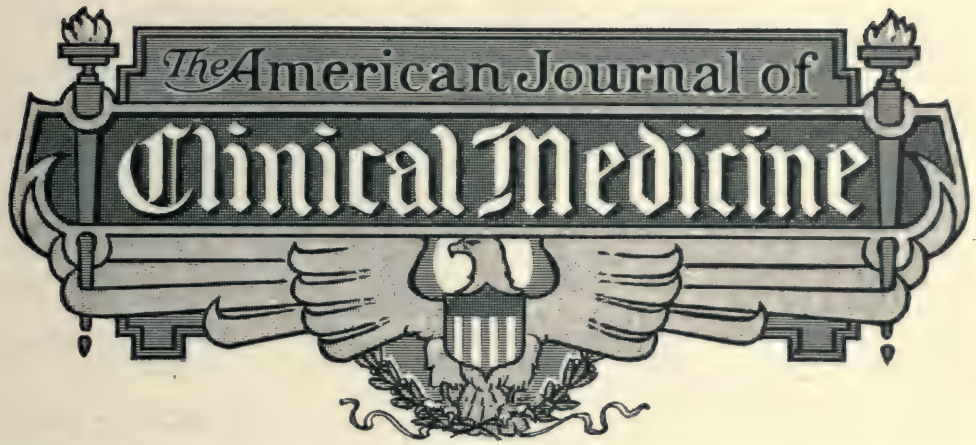
In enteric fever toxins are generated in the intestinal canal, and they affect the entire system. If we inhibit the growth of the bacillus typhosus and all other, generally pathogenic, bacteria and thereby put an end to toxin formation we reestablish normal conditions—and, as you surely know, disease and a normal body-chemistry cannot coexist. However, the whole question of intestinal antiseptics has been thrashed out so thoroughly that a perusal of the literature we are mailing you with our compliments will, we are sure, convince you that such procedure is absolutely necessary. Indeed the more modern textbooks recommend the use of the sulphocarbolates or other antiseptics for this purpose.

The experience of thousands of physicians has proven the sulphocarbolates to be the least objectionable and most efficacious of the entire group. Moreover, in the practice of these men the typhoid mortality has been reduced fully 60 percent. It is difficult to believe that any modern teacher of therapeutics would instruct his class that antiseptics are of "no use whatever in typhoid!" Prejudice dies hard, it is true, and those who teach only that which they themselves were taught a half century ago are likely to have but poorly educated disciples. Great things are happening in these days, and the real masters of medicine need to learn even as they teach. Under the circumstances it is comforting to remember that the "father of the sulphocarbolates," Waugh, also hails from Jefferson College.

Strangely enough, we have just picked up a letter from a Missouri friend from which we abstract the passage below. It needs no comment.

"Ten years ago I frequently encountered hemorrhage of the bowels in typhoid fever. For the last ten years I have been using the sulphocarbolates and during that time never had a hemorrhage in my cases. Now I am afraid to follow any other kind of treatment."

But "antiseptics are of no use whatever in typhoid fever!" Ochone! and also alas!



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No. 4

Long Life and How to Attain It

CICERO said: "If one would be old long let him be old betimes."

Youth is the period for expenditure, for progress, for expansion. During these palmy days the energies are ebullient and demand opportunity. The vital resources throng to the outlets and burst through restraint. The limbs outgrow their garments. There is a Force, a Power, in youth, that has not as yet marked out its limits, and the possibilities seem so boundless that the world cries exultantly: "Room! Room for the giant! Let him have his chance, his full chance, to show us the fulfilment of his wildest dreams, if the power of realization be within him."

There is no drain on his faculties as yet, but only a squandering of a troublesome surplus, perhaps only the exercise necessary to the healthy development of his dormant powers.

The middle period comes. The force of the current is yet there, but it flows quietly, albeit the channel is deep. The man's place is fixed, his worth has been tested, his capabilities are gauged. Rarely comes opportunity to the man who has failed to distinguish himself before fifty. Men have learned to step aside if he is the stronger, to

jostle him fearlessly if he is the weaker. There are no mysterious, unknown possibilities to induce caution. He seeks not so much to expand his interests as to conserve his acquisitions; he looks to defensive limits instead of opportunities for aggression.

Wise is he who heeds the advice of the Roman sage, and as the era of conservation comes on, seeks to apply it to his bodily forces as well as to his business interest. There is nothing more pitiful than to see an aged man feebly endeavoring to establish himself in enterprises he might have attempted forty years before, and squandering the nervous energies which, properly conserved, would sustain his vitality for many a happy year. The wise man knows when he has had enough—but who among us is wise? Not "the other fellow," surely—we can clearly see the unwisdom of *his* course. But, then, *we* are different, of course. Curiously enough, *he* thinks he sees the folly of *our* plans but is totally unconscious of his own.

Giothi seauton! "Know your own self," old man, and live in the posterity you have given the world. Act through the lusty sons and the blooming daughters through whom you live on and on forever. Let the powers

of which you are conscious act through them, and with the impetus their own ebullient youth can add. But study above all to appreciate to the last penny the amount of your vital capital and to preserve it from waste and rust, from thief and cajoler. Vitality is an asset that increases in value with every year, with its own decrease. It is to be hoarded as the miser hoards gold; to be managed as the ship-wrecked sailor spins out his lessening supply of food. We should study to make it go as far as possible, as the dry-farmer studies to preserve and utilize to the utmost every drop of his scanty rainfall.

To the doctor this means cultivating the stores of knowledge gathered from experience while utilizing the sturdy young legs of the juniors. Every doctor above fifty should associate with him a young partner, who may learn from, and save, his senior. The association is good for both in every way. The two can do better work and earn more money together than as competitors.

Every honest conviction, held by anyone, contains a truth and a lesson for everyone. And the way to derive the good is to treat it with mingled courtesy and caution, wearing neither horns nor a tether.

OLD DRUGS AND NEW DRUGS

In *Merck's Archives* for January Beverly Robinson contributes an interesting paper on "Drugs and Formulæ: A Word about the Old and the New." He calls attention to the fact that certain drugs formerly much esteemed, and rightly, have largely disappeared from practice. This applies also to formulas some of which have permanently established themselves in the affections of the profession and are employed as therapeutic entities rather than with regard to their separate ingredients.

The reasons for the neglect of some of these remedies are, in the first place, that many physicians do not familiarize themselves with what their predecessors accomplished, at least in actual practice. Then there is the tendency to look upon any newly introduced drug as superior to that which has gone before.

Doctor Robinson takes for his first example opium. Morphine has largely taken its place, and for emergency, quick effect, the hypodermic syringe certainly is invaluable. Nevertheless, if we wish to use this remedy to subdue inflammation he agrees with Alonzo Clark in preferring opium. Further, he believes that even now many a case of appendicitis would be saved from operative interference if castor oil and opium were wisely administered.

For another illustration he mentions quinine. Some cases of malaria do not yield satisfactorily to quinine, but in some of these he has had remarkable success from the use of the cinchona bark. Even yet men desirous of useful knowledge may with advantage read Huxham's treatise, and after perusing it turn to "Huxham's tincture of bark" with faith that will be amply justified by the results.

In this connection we will remark that in Reynolds' "Practice," some twenty years ago, were given the details of experiments made with the four leading alkaloids, or rather the best-known alkaloids, of cinchona as compared with cinchona itself. These showed that the bark gave rather a better average of cures with malaria than did either of the alkaloids. Nevertheless the disadvantages attaching to the administration of an ounce-dose of powdered bark were such that at the present time it is practically forgotten and we rely on quinine exclusively, that is, we think we do; but, perhaps, were we to apply the tests for quinidine, cinchonine and cinchonidine to our supposed quinine we might be edified and astounded.

In fevers, especially those of obscure source and origin, or even in marked and well-known typhoid fever, Dr. Robinson rarely gives any of the newer antifebricitants, still relying upon the innocent and very useful spirit of Mindererus. Similarly he employs alone or combined with the former spirit of nitrous ether. With children, and at the initial stage of what seems to be an ephemeral fever he employs aconite, but not otherwise.

In the treatment of inflammatory disorders of the respiratory tract, besides tuber-

culosis, he believes that no other remedy equals beechwood creosote. Of course, like other remedies it should be given properly to obtain the best effects. This means small or very moderate doses, frequently repeated, in solution, and appropriately combined.

There is something about Beverly Robinson's writings that always impresses us. They come with a directness which appeals to us. They are always based on a profound belief, and this on a long experience in practice and teaching, which renders every word he utters of importance. We rarely find anything in his writings with which we do not heartily agree. While our own experience has led us to extend the sphere of aconitine much beyond that which Dr. Robinson attributes to aconite, yet so far as he goes with the matter it harmonizes with our own views, that is, each is particularly advantageous when given in the initial stages of disease, before material lesions have had time to occur. Especially is this influence manifested in the group of inflammations which occur from catching cold. Nothing so quickly relaxes vascular spasm as aconitine and thus puts an end to an attack which otherwise undoubtedly would have entailed a prolonged and serious disorder.

Dr. Robinson's contention that the action of the crude drug cannot be exactly replaced by a single alkaloid derived from it, and the therapeutics of the crude drug transferred bodily to the alkaloid, is one with which we heartily agree. We have repeatedly called attention to this matter, but the superficial reader, who erects a man of straw, which he may whack to his heart's content, persists in endeavoring to force us into a position which we uniformly and emphatically have repudiated.

Aconitine, veratrine, morphine, quinine, atropine, strychnine, hyoscine, each has its own particular sphere of action, which is defined by clinical and physiologic experiments. These fields to only a relative degree harmonize with those covered by the original plants from which these alkaloids are extracted. There may in fact be very little relation between the two. The alka-

loids are not offered as substitutes for the former, but each stands upon its own footing.

Our preference for the alkaloids is because, they being uniform agents and thus always acting in exactly the same manner when given in similar dosage under similar conditions, we have a positive certainty as to our expectation of results, an assurance we do not have when using the crude drugs, since the latter differ widely as to the quality and the quantity of the effects a given dose will afford. For these reasons we base our practice on the alkaloids, only resorting to the crude drugs in cases where the alkaloids are not suitable.

Frankly, we do not see how any practitioner could be so silly as to administer hyoscyamus when he desired the sedative effect of hyoscine. We do not see how he could face any emergency where instant and powerful intervention alone will save the patient, and rely upon a remedy of whose effect and whose strength he can only judge by trying it on the patient. These things to us seem axiomatic. We do not wonder that Burggraeve and his followers became impatient, when so very many in the profession failed to realize these truths as they, who had studied them, did.

Do not be alarmed about the future of great truths. They are like the sun; you cannot hinder their progress.—Andral.

SOME FACTS ABOUT ANAPHYLAXIS

In 1902 Richet directed attention to a phenomenon termed by him anaphylaxis, the contrary of prophylaxis. (It had before this been known as "hypersensibility.") A dog receives an intravenous injection of congevine (a poison isolated from the tentacles of the sea-anemone) of 0.05 Gram per kilogram weight. The animal presents symptoms of intoxication lasting two or three days, such as diarrhea with tenesmus, hypothermia, enfeeblement and emaciation. In ten to twelve days the animal recovers and in a month cannot be distinguished from a normal dog.

If a month after the first injection another one is made, equivalent to one-twentieth of the first dose, immediately the dog is seized with repeated vomiting, many times bloody, and profuse bloody diarrhea. He has pruritus, violent dyspnea, the arterial pressure falls, complete motor paralysis appears, with anesthesia, and the dog often succumbs—always if the dose of congestine is 0.01 Gram per kilogram of weight. But this dose induces no symptom, scarcely, with a new animal. The first injection has rendered the animal more sensitive; and this state is termed anaphylaxis.

Richet obtained similar results with a poison extracted from mussels—mytilocongestine.

In 1903 Arthur showed that nontoxic albumins, and even blood-serum, could induce anaphylaxis. Milk, ovalbumin, papain, extracts from green peas or lentils, and peptone, have generated it. This was the case also with bacterial toxins, in fact any albumose or any substance approaching it in constitution seems capable of inducing anaphylaxis, varying in intensity with the inducing substance and its injection into either the veins, peritoneum or brain.

Rosenau and Anderson sensitized conies by the intestines; fed on horse-flesh or treated by horse-serum introduced into the stomach by the tube, they became hypersensitive to the serum of the horse. Disease from serum, the tuberculin reaction, and the illness that follows puncture of a hydatid cyst when the liquid reaches the peritoneum, are examples of anaphylaxis.

It is not so generally known that the hypersensibility following the ingestion of certain albumins is also due to anaphylaxis through the digestive tract.

Lesné records the case of a girl aged eight years. She took an egg daily until the age of seven without difficulty, but occasionally had urticaria and unilateral edema of the eyelids or face. For a year she was seized, each morning at the beginning of meals, with intense abdominal pains, growing pale, quitting the table, rolling on the ground, with free diarrhea; then the pains ceased and she finished her meal. The attack re-

appeared at the same time next day. The daily egg was blamed, as the attacks began when a little of it was eaten, and from the day this was stopped the attacks disappeared suddenly, digestion became normal, and the stools lost their fetor.

Four months later the child was given food containing a little egg. Immediately she was seized with intolerable abdominal pangs and uncontrollable vomiting, first feculent then bilious. The intolerance was absolute for forty-eight hours, the tongue red and dry. The facies was cholericiform, emaciation great, debility extreme, temperature 97° to 97.7° F., pulse 140 and relaxed, extremities blue and cold. The urine was scanty, showing acetone and a little albumin. Following diarrhea the constipation was obstinate, the liver hypertrophied, the stomach shrunken and not tender. No other disorder was detected. Treatment was by applying hot wet dressings, injections of serum, gastric and intestinal lavage, and absolute dieting. Recovery was gradual, occupying two weeks.

This was a case of anaphylaxis from eggs, notable by the four-months' duration of hyperesthesia, the sudden explosive attack with toxic phenomena, the small dose of albumin ingested, and the lowering of arterial pressure.

The common symptoms are gastrointestinal dyspepsia, saburral tongue, bad breath, heaviness in the stomach, tympanites, constipation or diarrhea with fetid stools, and urticaria. These cease sooner or later when eggs are stopped. Sometimes milk causes similar symptoms, although previously well supported. (Hutinel). Eruptions may precede or accompany the attacks. Sometimes the trouble may be avoided by substituting buttermilk or whey. Besredka showed that in the guinea-pig milk did not induce anaphylaxis, but it vaccinated against the lactic form.

To this cause are also attributed the attacks sometimes following the eating of strawberries, mussels or oysters. It is necessary to exclude attacks due to spoiled foods of this sort, as well as typhoid and paratyphoid infections. Poisoning by non-

poisonous mushrooms may be attributed to this cause also. Predisposition is essential.

Clinically anaphylaxis by ingestion manifests itself under the following aspects: (1) Phenomena of light intoxication: digestive troubles, urticaria, strophulus, local edemas resembling Quincke's disease, which, also, Dreyfus attributes to anaphylaxis. (2) Phenomena of *foudroyant* intoxication: abdominal pains, vomiting, with constipation or diarrhea, the choleric form syndrome, with fever or more frequently hypothermia, fall of arterial pressure and collapse, often mortal. This last approaches the cyclic vomiting of infancy, which may also be due to anaphylaxis.

It is as impossible for a human being to be happy who is habitually idle as it is for a fine chronometer to be normal when not running.—O. S. Marden.

THE ABORTION-QUESTION

Not a year has gone by that we have not printed in these columns one or more articles upon this profound human problem, but their appearance every time has been the signal for a lively discussion, showing the intense interest which physicians and the public at large feel in it. It is because of this and the fundamental importance of this question that we give room this month to two more articles by able and conscientious men, each certain that his own position is morally sound, yet each disagreeing with the other in almost every particular.

One of our correspondents advocates enlarging the legal power of the physician, so that he might bring pregnancy to a close, not only in cases where it threatens the life of the prospective mother, but also in cases where impregnation occurred during rape, or, perhaps, would destroy some Gretchen's good name, or when the child is likely to be a defective, or maybe to prevent the physical or financial overburdening of an unwilling mother.

The other writer denies the right of the physician to take the life of the fetus under any circumstances, holding that from the moment of conception the unborn child has the same right to life as any breathing human

being, and that to destroy it, even to save the mother's life, is murder.

Neither of these extreme positions will be endorsed by the majority of physicians. Here, as in most things, the truth lies in the middle. In commenting upon Dr. Flynn's article (see page 409) we have already stated our objections to his view. Yet we respect his views, because they reflect a noble soul and are based upon high moral grounds and firm religious faith. However, in its rigorous fidelity to his own understanding of a divine precept his teaching is more pitiless even than was the puritanism of the early fathers, and absolutely blind to the demands of social welfare. As Dr. Johnson well says in his paper, this view would make it wrong to interfere even in cases of ectopic pregnancy where the child could not possibly survive.

Dr. Johnson's argument addresses itself mainly to two things: (1) Our interest in and sympathy for the woman, as a citizen and a human being in trouble; (2) The contention that to protect itself against the propagation of defectives society has the right to destroy the fetus—practically every fetus, that is to say, which is the result of illicit intercourse, since "practically all illegitimate children are defective." His argument is an exceedingly able one and doubtless will carry conviction to many.

Much as we all sympathize with every woman in trouble, and especially with the confiding yet inherently innocent girl who has risked everything and lost all for love, yet this cannot be allowed to determine what is right and what is wrong. We sympathize with the man or woman who faces the prison for his first crime, or for the criminal going to the gallows, but that does not justify the crime. We naturally sympathize with every woman going through the agonies of child-birth, nor do we wonder that she shrinks from this crisis, often much too frequently recurring; but the pain which she inevitably suffers, the social and financial distress that child-bearing entails, are not enough alone to warrant our interference with the most natural and the most necessary of nature's laws.

The biologic if not the social purpose of marriage is reproduction, and sexual congress is but nature's expression of that law. Practically every young woman, when she marries, understands this; she realizes that children are a possibility, indeed a probability of the married state. If she is physically unfitted to bear children, then surely she is unfitted to take on the role of a wife. It is in recognition of this fact that bills have been introduced in several legislatures, requiring physical examination prior to marriage, both of men and women.

Bearing children is becoming more and more a burden to women, but more on account of changing social conditions—which need not be discussed here—than because of actual physical incapacity; and the more they dread the ordeal, the more pleadingly do they beg the physician for relief. And yet the child, when it comes, is not unwelcome, neither does its advent bring ill-health as frequently as we are led to believe. As a matter of fact, the invalidism accompanying the married state is far oftener the result of infection on the part of the husband, who sows his wild-oats early and delays till later and later the taking of a wife.

Children, instead of being a burden, may really become a means of assistance and support. Indeed, about all the old-age insurance our foreign-born citizens have or seem to require is a growing family, where the maturing sons and daughters lend comfort to the days of struggle, help found the family fortune a little later in life, and by and by save the parents from penury in their declining years.

The illegitimate child falls under a somewhat different head, owing to the alleged fear that it may become a defective and a burden to the State. There are many divergent opinions upon this point. It certainly is not agreed, as Dr. Johnson claims, that "practically all illegitimate children are defective." Carlsen (of Denmark) found that the percentage of defectives among the illegitimates in his country was below instead of above the average. Spitzka and others have asserted the contrary, submitting interesting statistics in support of their

claim, but such data are exceedingly hard to get in sufficient completeness to determine finality. The foundling asylums, which are filled largely from the defective class, irrespective of the legitimacy of these unfortunate inmates, are drawn upon mainly for such data.

Yet even if it could be shown that a much larger percentage of the illegitimate children were defective than those born within wedlock, this would not justify the wholesale slaughter of the innocents. The percentage of degenerates is much greater, among the Russian Jews flocking to our great cities (perhaps as large as among illegitimates) than among the Teutons who make up so large a proportion of our population. Yet I can not believe that anyone will claim that we should kill off all the Jews before they are born—though this suggestion might actually be considered seriously in some quarters!

While the roll of infamous bastards is a long one, the number of those "natural" children who themselves, or through their seed, have been of service to the world is more than equally large. Among them are monarchs like William the Conqueror, popes like Clement VII; great soldiers like Don John of Austria, Marshal Saxe and General Burgoyne; great writers like George Sand (a descendant of Marshal Saxe, through illegitimate channels), Lord Byron, and both the Dumas, father and son; artists like Leonardo da Vinci; theologians like Erasmus; philanthropists like James Smithson, the founder of the Smithsonian Institution; statesmen like Alexander Hamilton and our own Lincoln, which latter ascribed the best that was in him to his mother, who was illegitimate.

While it is alleged that genius finds its explanation in degeneracy, still the world owes too great a debt to its great minds to resort to a wholesale holocaust of all the fetuses whose parents present mental or moral irregularities or physical stigmata. Carrying the policy of extermination to its natural conclusion, we should emulate the policy of the Spartans and rid ourselves of all weaklings as early as possible. How-

ever, instead of supplying men and women of genius who present evidences of degeneracy with free supplies of abortifacients, it might not be a bad idea to sterilize them. The effect of such an operation—so simple in the case of men—upon the intellectual productive power would be worth watching, indeed!

Dr. Johnson's definition of rape is an interesting one. He extends it to cover cases of betrayal and seduction. Supposing this idea were accepted, then every pregnancy occurring outside the marriage relation would become a "rape," and the young woman in every case would be divested of moral responsibility. Yet we all know that in the majority of instances the weakness is as much the man's as the woman's, and the invitation to illicit relations comes almost as frequently from the latter as from the former. Furthermore, accepting this definition, all legal restraint would be removed from the performance of feticidal operations, and they would naturally multiply, as would the necessity for them when restrictions were removed. When a woman is impregnated during *actual* rape we agree that there is sufficient cause for therapeutic abortion—and this should be legalized.

The appeal to our sympathies for poor, stricken Gretchen will find a response in the heart of every kind-hearted man and woman. Hers is the tragedy of the ages—her story has been told again and again in art, in music, in literature. No characters in the world of fiction move us more than does Marguerite in "Faust," Effie Dean in "The Heart of Midlothian," and Hester Prynne in "The Scarlet Letter." But will making immorality easy and safe take the blight of disgrace out of these troubled lives, or what is more important, *will it save other girls from going wrong?* I think not.

The problem is not an easy one. I have no solution for it, and I admit its complexity. But I protest that it is no solution for one evil to bury it under another one equally great. Life is a sacred thing, a mystery. Let us preserve it, protect it—that is the true mission of the physician. Our profession is engaged in a constant struggle to preserve

the weak—the "unfit," if you please. Shall we change our mission and commence to destroy—at the very portal of life? Most assuredly, No!

Failures are only endeavors temporarily off the track and are often but pillars of success. Many of our failures swing us to greater heights of success than we ever hoped for in our wildest dreams. Life is a successive unfolding of success from failure.—George F. Butler.

OUR BELIEF IN DRUGS

We believe in the efficacy of treatment by the use of drugs. Others do not. There's reason for both. We employ pure drugs, single ones, which do not vary. Every dose of any one of them is exactly as strong and exerts exactly the same powers as every other dose of that same remedy. We know precisely what each dose can and will do when we administer it. We do not have to "try a few doses" to see what the effect is going to be. We do not lose precious time thus but get in our work, sure and exactly right, at the earliest moment, before the disease has effected a firm lodgment in the body, or caused alterations in the tissues that can only be removed, if at all, by the slow processes of nutritional repair. We stand ready to extinguish the fire at its start with a bucket of water, instead of waiting till the whole building is ablaze. So surely as that all nature is correlated by the laws that govern her, we are in harmony with her in this matter.

We study disease at the bedside, in the living patient, and we study the action of remedies upon him. One observation is noted, it is repeated in each similar case until we recognize it as a law, subject to the exceptions incident to varying concomitants. That is why we believe in drugs.

Our friend does not believe in drugs—but, then, he does not use them. Perhaps he thinks he does; but his prescriptions go to some pharmacist whose stock is old and decayed or has been supplied to him in poor quality; or the doctor has too little knowledge of drugs to trust himself to the single one that is needed, and orders a group—which doesn't happen to give the desired effect.

He does not see any difference between veratrum and veratrine, consequently doesn't believe in the difference.

Not being sure of his drugs he dare not use them boldly, and loses out. He waits to complete his diagnosis, and has the poor satisfaction of learning from it what he might have done last week. There is just as much reason for his pessimism concerning drugs as there is for our belief in them. If the study of drug-action for a lifetime has taught us nothing, assuming for ourselves the average mental capacity of mankind, then is all study useless, all effort unavailing, and the only true philosophy that of the ape—an ape eons ago, an ape still.

Let the howlers howl,
And the growlers growl,
And the prowlers prowl,
 And the gee-gaws go it;
Behind the night,
There is plenty of light,
And things are all right,
 And I know it.

THE CONFERENCE ON MEDICAL EDUCATION

The sixth annual conference of the Council on Medical Education of the American Medical Association was held in Chicago the last day of February and the first two days of March, jointly with the fifth annual conference of the Committee on Medical Legislation of the same body. Its meetings were quite liberally reported in the newspapers, and the general conclusions have already become public property through this source, but to one in attendance there were brought out many interesting and illuminating things, which seem to be worthy of special attention.

In addition to the medical delegates there were present prominent educators, representatives of the scientific branches of the Government Services, and well-known jurists, most of whom took part in the program. The reports and addresses were uniformly excellent and their ethical tone and professional spirit were high; they could hardly fail to inspire those in attendance to nobler ideals.

We cannot comment here upon a tithe of the work of the Conference. We can only "hit the high spots," some of which will be referred to briefly in this editorial and those that follow.

Only a few years ago medical education in this country was on probably a lower plane than in any other claiming to be "civilized." While there are many medical schools which today are anything but cause for pride, the advancement of the last quarter century has been remarkable. Probably the poorest of the medical colleges of 1910 will compare favorably with the best of those of the early '70s; and the best American schools now stand on an equal footing with the best medical institutions abroad.

But while there is much to be proud of in our progress in medical education, the sentiment of the Conference was that there still remains much to be done. The standards of quite a number of our schools seem to be rated as sufficiently high, but there are many others which fall far short.

The line of cleavage between the "acceptable" and the "not acceptable" institutions seems to be determined mainly by two considerations: (1) The standard of preliminary education required, and (2) the adequacy of the material or physical equipment for proper instruction. It seems regrettable that the latter consideration, bearing as it does the sign of the dollar, should have so much weight. This will be referred to later.

Nearly all of the speakers brought out the point that those undertaking to prepare men and women for the practice of medicine have a great moral obligation to fulfil to the people. An ignorant and unskilful physician is a menace to the health of the community and becomes a public danger; those who for private gain or personal advancement are responsible for making such men doctors are, according to one speaker, "little less than criminal." It is morally wrong for a community to go into the medical-college "business" to provide professorships for its leading physicians, or for a college or university to establish a medical department simply to "round out" its

course of instruction—just as wrong as it is to run a medical school simply as a money-making mill. President Pritchett, of the Carnegie Foundation, praised highly the physicians of Seattle, who went on record as opposing the establishment of a local medical school unless the University of Washington should decide to locate in that city an adequately equipped medical department; and President Schurman, of Cornell, made the significant statement that “the desire for institutional renown is quite as unhalloved an aspiration as that for personal gain.”

Within the last decade there has arisen, as Prof. Victor C. Vaughan pointed out, a movement the like of which was never seen before in the world, having for its purpose the physical betterment of the race. Ten years ago no man thought of endowing medical instruction or medical research, today millions are becoming available for the study of the human body.

Men are just beginning to realize that disease is the greatest handicap to efficiency or success, that it is the result of ignorance, and that it can be prevented or cured as men grow in wisdom. It follows as a natural sequence that “the nation which fails to develop scientific medicine,” again quoting Professor Vaughan, “cannot become prominent in the civilization of the future”, and that “the development of scientific medicine means the physical, intellectual and moral betterment of the race.”

Conferences such as this one are certainly doing a great deal of good. Their findings are not “the last word,” and they have a tendency to magnify the scholastic as compared with the practical side of our calling; but they throw the searchlight upon our weak points and through healthy discussion lead to their removal.

But one thing I object to: the tendency to minimize the work of the smaller schools, many of which are doing magnificent work. Laboratory equipment is not everything; it is not even one of the most important things. Institutions which keep close to the young men and women who are fighting their way to the front are of vital im-

portance to the welfare of the nation. We believe in the boy of farm and factory and in his schools.

You get your pay for doing right the minute the act is done—in the very act of doing it. In the same way punishment comes with the doing of a mean, cowardly, unworthy act.—Golden Rule Jones.

MEDICAL SCHOOLS AT HOME AND ABROAD

At the recent Conference on Medical Education a number of charts were hung on the walls, which graphically illustrated important facts concerning our medical schools and our system of licensure. The writer was particularly interested in one chart showing the number of medical colleges in the United States as compared with those in foreign countries. There are in this country 160 medical schools, including the sectarian ones. In all the rest of the world there are 172 medical schools. In other words, in the United States we have nearly as many institutions for the making of doctors as are supported by all other nations put together.

Of our 160 schools 138 are nonsectarian. Of these 68 were designated as “acceptable” by President Bevan in his report. Of the remainder 37 need certain improvements to make them acceptable, while 33 are branded as “not acceptable.”

Compare with this the situation in other countries: In Germany there are 20 medical schools; in France, 5; in England, 21; in Scotland, 8; in Ireland, 4; in Austria, 7; Italy, 20; Russia, 10; Spain, 9; New Zealand, 1; Australia, 3 in Spanish America we find that Mexico has only 1 medical school; Argentine, 2; Brazil, 3; while most of the other South-American republics have only one each. Canada has 8.

The quality of instruction and the requirements for admission in most of the foreign schools are high, so that the young man, after he completes his course, has an excellent general education as well as a thorough medical training.

There undoubtedly is a movement on foot to crowd out many of the medical

colleges in this country. President Bevan, in his report, said that the number of schools should be reduced to 60 or 70. This movement is supported by the increased cost of medical education, which was referred to by nearly every speaker. President Schurman said: "The costliness of medical education seems to sound the death-knell of the proprietary or private medical school," and Professor Vaughan declared that "the most expensive training in the world is in medicine, and the medical school of the future must either have private endowment or state aid."

Schurman again made the statement that while the college of art are costly and schools of engineering and agriculture even more so, "the medical college is the costliest of all." According to President Pritchett of the Carnegie Foundation, it costs \$10,000 a year to conduct any single department of instruction during the first two years of the medical course. An income of \$50,000 to \$60,000 is needed for the first half of the course and fully \$100,000 to maintain the school. This is placed as a minimum and it was remarked that the tendency is constantly toward an increase. Vaughan placed the figures even higher than these, asserting that to maintain a medical school adequately it should have an endowment for an entering class of 50 to 100 of at least half a million dollars, and this without hospital facilities. A well-equipped school really should have four times this endowment and a yearly income of at least \$200,000—and this makes no provision for hospital service! According to the speaker last quoted, none of the first-class medical schools take in more than one-third of what it costs for their maintenance.

It was generally agreed that to give first-class instruction it was essential that every school should have a paid faculty, so that the teachers might devote their entire time to its service. Not only should the teachers in the so-called laboratory branches have salaries, but also the teachers of the clinical branches, inasmuch as a man cannot do efficient work unless he enters into his educational duties heart and soul, without other

disturbing interests of a bread-and-butter nature.

In this connection President Schurman presented a dilemma: In the last two years of the course it is essential that the teacher should have experience in the treatment of disease, and to have this experience he must practice; and, yet, if he practises his profession his interests are necessarily centered upon the work which gives him a livelihood instead of upon his teaching. As he put it: "No man can teach the practical branches in the last two years *unless* he is engaged in practice; and just *in proportion as he is engaged* in practice and absorbed in it he is unsuited for teaching."

While it is unavoidably essential that medical education should cost more, it seems a pity, as we have already said, that it should bear the stamp of the dollar. We are inclined to think that possibly too much emphasis has been placed upon this feature of our medical education. While it is important that the student should be an educated man, that he should have thorough grounding in the sciences as well as in the cultural studies before entering upon his medical course, is it not possible that too much emphasis is laid upon the laboratory work and too little upon the clinical? Of course the young man must dissect the human body and that means that he should work in the anatomical laboratory, but this is little more expensive than it ever has been. Pathological and bacteriological study require an ample equipment, but this does not run into the hundreds of thousands or millions, nor is a fortune required to provide the essentials for a chemical laboratory sufficient to give good instruction.

We suspect that the real issue is being befogged, and that those interested are bearing down too heavily upon the expense of equipping these laboratories. After all, it is the man who counts. He is the end-product of the medical college and it is his efficiency as determined by properly authorized authorities which must determine the quality of the work the school is doing rather than the sum invested by the college in microscopes and other scientific instruments.

As to the amount of education which the student should have before commencing his medical instruction, it was generally agreed that the equivalent of two years in the college of arts is sufficient; more than that time is unnecessary and may be harmful, since it increases the age at which the young man may enter upon his life to work far beyond that required in other callings and tends to make him a scholastic of waning enthusiasm and diminishing adaptability for the practical problems of our very practical profession; and as President Northrup put it: "I would give more for a fellow who is really hungry for knowledge than one who is trained in his profession from the days of Methuselah down." And with that we most heartily agree.

There is an idea abroad among moral people that they should make their neighbors good. One person I have to make good: myself. But my duty to my neighbor is much more nearly expressed by saying that I have to make him happy—if I may.—Robert Louis Stevenson.

THE OVERCROWDING OF THE PROFESSION

In the United States, with an estimated population of something more than 88,000,000 people, according to the statistics supplied at the Conference, there are 134,402 physicians, or an average of one physician to 655 people. South Carolina has the smallest number of physicians in proportion to its population, viz., 1 to 1324 people. North Carolina has 1 to 1216; Minnesota, 1 to 981; North Dakota, 1 to 971; Wisconsin, 1 to 936; Alabama, 1 to 924; Virginia, 1 to 917; Utah, 1 to 908; Delaware, 1 to 906; Louisiana, 1 to 900.

The most-congested communities so far as physicians are concerned are: Nevada, with 1 to 239; the District of Columbia, 1 to 262; Colorado, 1 to 386; California, 1 to 401; Vermont, 1 to 533; Wyoming, 1 to 541. Illinois has 1 doctor to 587 people; Indiana, 1 to 557; while New York has 1 to 617; Ohio, 1 to 585.

We are surprised to learn that the western states like Washington, Idaho and Oregon, in which the state-board examinations for

candidates desiring to practise have always been considered peculiarly severe, were about the average for the entire country, running 1 to 616, 1 to 664 and 1 to 646, respectively.

There can be no question that there are far too many physicians in this country, and instead of the proportion diminishing, according to figures given by President Pritchett it is actually increasing. In both the North and South the increase in the number of physicians more than keeps pace with the loss caused by death and the added requirements made necessary by increase of population. Our medical schools are, today, graduating three times as many physicians as the country requires, according to President Pritchett, who places the actual need at about one doctor to 1500 people.

These figures certainly deserve careful consideration. In their study we should not forget that as a result of the activity of our profession in mastering sanitary and hygienic problems and in diffusing the knowledge thus obtained among the people, crystallizing some of it in the form of law, we have reduced the volume of disease, so that fewer physicians are needed to care for the sick than were required a decade or more ago. Then the osteopaths, the Emmanuelists, the Christian scientists, and thousands of hospitals, dispensaries, sanatoria, and public and private charities, are still further relieving us of the "burden."

Yes, we have too many physicians, but it is not yet clear how the difficulty is to be solved without working injustice upon some, and probably upon many. For the solution of this problem the raising of standards of medical education has thus far failed. After all, "the best man wins," and the "fittest" survive in the struggle for professional livelihood. The better medical schools will eventually get the students according to the same test. The perfection with which they adapt themselves to the needs of the country will determine their popularity.

And that reminds me that I heard much more about the laboratory branches than I did about the practical portion of the medi-

cal course. Isn't the curriculum losing its proper proportion? This point should be considered in computing the cost of *essentials* in medical education.

God be praised, whate'er comes after, I have lived and toiled with men.—Rudyard Kipling.

A FALSE STANDARD FOR EXAMINING BOARDS—ITS PRACTICAL RESULTS

The Illinois State Board of Health and its enemies have again locked horns. This time it is over a resolution passed by the Southern Illinois Medical Society, casting a whole lot of mud on the State Board of Health for alleged slackness in the way of passing candidates for registration as physicians. It is said that this resolution was passed, without any special attention being given to it, through the influence of Dr. Carl E. Black, Chairman of the Judicial Council of the Illinois State Medical Society. It referred to Illinois as "one of the rotten spots in the United States in medical education," and requested the Secretary of the State Board to explain "why Illinois should bear the stigma of being one of the plague spots of the country in medical education, medical examination and medical licensure."

This provoked a reply from Dr. Egan, and that a rejoinder from Dr. Black. It is evident from the latter's reply that the onus of the matter consists in the statement that Illinois passed a greater percentage of candidates than other states, and that this is the only criterion by which it is proposed to judge of the relative merit of any State Board of Medical Examiners. In other words, the greater the percentage of candidates rejected, the higher the standing of the State Board. There is no qualification whatsoever as to justice to the candidate, or the superiority in grade of candidates offered. If you wish to rank at the top of medical examiners, reject *all* the candidates that offer, and the nearer you come to this ideal, the higher will be your standing.

This matter is not new. Dr. Black made charges against the State Board before; they were taken before the Governor, who

asked for specific instances of dereliction, with the result that not a scintilla of evidence was offered. The Governor expressed himself with his customary directness about people who were ready to make charges without facts to sustain them.

Chicago colleges give a better medical course than many others, and pay more attention to such instruction as fits candidates to pass such examinations, and it is natural that the Illinois candidates should stand high. In California, whose State Board is believed to be very difficult, it is said that the result of excluding most of the regularly educated physicians applying has been to let in a horde of quacks, who do not seem to find any obstacle. The statement has been made that there are more of these practising in that state than of the registered physicians.

THE JUGULATION OF DISEASE

The possibility of acute infectious diseases being aborted or of presenting themselves in abortive form was universally admitted up to a comparatively recent period. It was not until the revolutionary methods of Burggraave commenced to make themselves felt in current medical thought that the absolute necessity of such affections pursuing in every instance a typical course was advanced. But when the pugnacious Belgian injected the word "jugulation" into medical terminology, an opposition was at once aroused, and this has developed into something very like a fetish.

The textbooks formerly described abortive forms of the essential fevers, but as soon as the possibility of these was called in question with characteristic timidity they began to run for shelter, and the later editions have very little, if anything, to say along this line.

Examining into the matter, however, we find that all the proof is in favor of the abortion, or jugulation, of such attacks. Bacteriology, if it teaches anything along this line, shows that the powers of the human body are able to cope with a limited number of invading microorganisms, and that it is only when the number of the invaders or

their virulence exceeds the natural defensive capacity of the body to cope with them that the disease is established. Clinical observation teaches the same thing, and those who put the treatment recommended by those who believe in the jugulation of infectious maladies to a fair clinical test are reduced to the necessity of acknowledging the truth of this doctrine, or else of confessing their inability to diagnose these maladies in their early stages.

The closet-clinician makes a very simple matter of the question; to him a case of pneumonia or of typhoid fever is only such provided it passes through all the classical stages of the malady in question, in the classical period. If it is cut short, or stops spontaneously before each of these stages is completed, then it was not a pneumonia or a typhoid fever. Just what it was seems a matter of uncertainty. This method of diagnosis simply begs the question. It is not a method founded on the study of nature but upon closet-devised rules and distinctions.

FOR THE BOYS LEAVING COLLEGE

Next month, in addition to the usual supply of good stuff for the regular reader, we shall print a large amount of material which will be of special interest to the young men who will soon be graduated from our medical schools.

Out of the richness of their own experiences we want to ask as many of the "family" as can and will to chip in with a word of advice and helpfulness for the boys whose troubles are about to begin. Think of the day when you went out into this world of trouble and with a green sheepskin (greener yourself), and give the boys a lift.

That we may get down to "brass tacks," suppose you contribute a short paper (200 to 300 words is enough) on one of the following subjects:

"Where Shall the Young Doctor Locate?"

"How Shall He Equip his First Office, allowing an Expenditure of \$100 to \$200?"

"What Should Be the Relation of the Young Doctor to the Old?"

"Shall He Dispense or Prescribe?"

"What are the Twenty Remedies that He Will Find the Most Useful?"

"What are the First Emergencies He Will be Called upon to Meet, and How Shall He Meet Them?"

The time is short, so I urge everyone to sit down and write the little article today. Other titles beside those mentioned above may suggest themselves—but make the article a practical one.

A STRAY MILLIONAIRE

Dr. Frank Billings has been sorely blamed in some quarters for having established a practical monopoly of the treatment of millionaires in his own behalf. There are a few other members of the medical profession, like ourselves, who would not mind dipping our hands into the millionaire's purse occasionally, and we feel that the illustrious Treasurer of the American Medical Association ought, if ethics forbids his sharing his fees with us, do better yet, and share his patients.

But we learn from *The Record-Herald*, Chicago, that one at least of the millionaire persuasion escaped him. Dr. Chasing Hatred Chase Jordan, M. M., M. D., L. G., of obscure origin, but reared by a negro family, testified in court that he had received something like \$20,000 from the family of the late Kansas City millionaire, Thomas H. Swope, for remedies he had compounded from herbs. These herbs the alleged Dr. Jordan said he gathered, or had gathered for him from the fields. He ascertained their harmlessness by chewing the herbs himself, when if no bad results followed he gave them to the patients. As to the particular remedial virtues the herbs might have possessed, he seemed to have been entirely innocent of a ghost of a suspicion of knowledge. He explained that the letters following his name meant: M. M., either "Medicine Manufacturer" or "Medicine Minister," M. D., "Medicine Doctor," while L. G. meant "Liver and Gall." Certainly the quantity of the latter ingredient possessed by the alleged doctor entitled

him to not one but sixteen big G's following his name.

While this ignorant pretender was securing such princely sums from the millionaire's family, there was well within reach of the latter's residence many a really educated and scientific physician who was finding the greatest difficulty in raising money to pay his monthly rent.

Haec fabula docet—well, what does it teach?

THE INTERCOMMUNICABILITY OF HUMAN AND BOVINE TUBERCULOSIS

Prof. A. Eber of Leipzig, in the *Muenchener Medizinische Wochenschrift* for January 18, 1910, describes a series of experiments and investigations which seem to prove that it is possible to transform the tubercle bacillus derived from tuberculous material from human sources into a form highly virulent for cattle and rabbits, and which in other ways behaves like tubercle bacilli of the bovine type. He accomplished this result by the repeated passage of human tubercle bacilli through the bovine organism. He insists upon the close relationship existing between the two types of the microorganism.

Although it is hardly the place here to enter into detailed bacteriological discussion, it may be well to mention the matter briefly, because these, like other experiments of a similar nature, are directed against the well-known opinion expressed by Koch at the London Tuberculosis Congress, in 1901, that bovine tuberculosis is not very dangerous to man. The controversy which arose after the London Congress was somewhat lacking in a proper basis, inasmuch as Koch had not asserted that bovine tuberculosis was entirely different from the human disease and that it could not be transmitted to man from cattle. He had only said that among the various sources of tuberculous infection for man, bovine tuberculosis does not occupy an important place, and this statement he fully vindicated by facts.

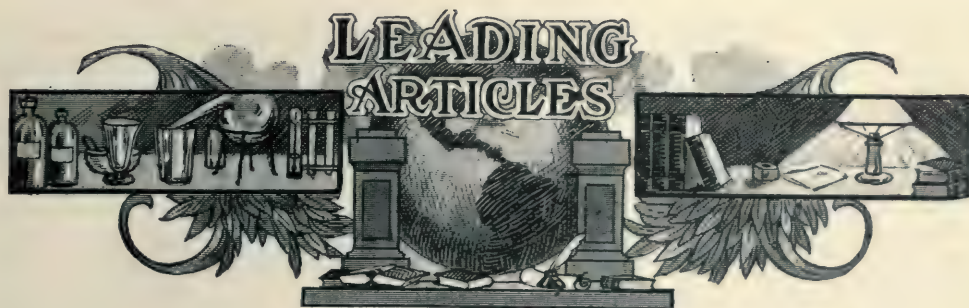
There is no doubt, as Theobald Smith had shown as early as 1898, that the bovine tubercle bacillus differs from the human variety in several important points; and

there has never been adduced any well-authenticated instance of phthisis in man which could be traced to a bovine source. Nevertheless, it would be foolish and ill-advised to neglect, for this reason, all hygienic precautions in dairies and in the management of cattle.

It may be true, as has been asserted by Von Behring, that infants fed on cows' milk which contains tubercle bacilli are in danger of infection. It may even be true that these bovine tubercle bacilli may find the conditions in the infantile organism favorable for their growth and multiplication, after a longer or shorter period of latency. It may also be true, as asserted by Nathan Raw of Liverpool, that the so-called localized lesions of tuberculosis are due to a bovine infection, while pulmonary tuberculosis is always produced by the human variety of germ. I say these things may be true, but nevertheless I do not believe it, because their actuality has never been proven.

Even the special conference held on the question during the Washington Tuberculosis Congress, in 1908, did not lead to any agreement in the matter, and the absurd proposition to determine it by a resolution to be offered to the Congress for action was only with difficulty prevented by Professor Koch from being put to a vote. As though such questions could be settled by the vote of a congress!

In view of the fact that the whole subject of the relation of human and bovine tuberculosis is still *sub judice*, it behooves us to continue the exercise of proper care. On the other hand, so much evidence has been brought forward to show that the bovine tubercle germ is at least rarely an infective agent in man, that we need not cherish any foolish fear of acquiring virulent infection from a stray sample of contaminated milk or meat. In the matter of infants' feeding the question is of greater importance, and in order to be entirely safe, it is necessary to see that the milk with which our little patients are fed does not come from tuberculous cows. That no safeguard may be lacking, the inspection of cattle is proper and to be encouraged.



Hard Teeth and Soft Teeth

A Study of the Systemic Causes of Dental Disease

By **EUGENE S. TALBOT, M. D., D. D. S., LL. D., Chicago, Illinois**

DR. G. V. BLACK, some years ago, published an article on "An Investigation of the Physical Characters of the Human Teeth in Relation to Their Diseases, and to Practical Dental Operations, Together with the Physical Characters of Filling Materials." (*The Dental Cosmos*, May, 1895.) His researches in this report were extensive, painstaking and exhaustive. The conclusions arrived at are:

"The teeth are strongest in youth and early adult age, diminishing somewhat in strength with advancing age.

"Teeth that have lost their pulps and have become discolored lose strength in a marked degree, apparently from deterioration of the organic matrix.

"Teeth that have become badly worn from mastication and in which the pulps become so much calcified as to cut off nutrition of the crown portions of the dentin lose strength, apparently from deterioration of the organic matrix.

"Teeth of old people, and especially those in which much calcification of the pulps occurs, deteriorate in strength.

"There is no basis for the supposition that the teeth of children under the age of 12 years are too soft to receive metallic fillings.

"Differences in density or in percentage of lime salts in the teeth are not the control-

ling factors in the strength of the teeth nor their hardness, this seeming to depend upon the condition of the organic matrix.

"Differences in strength of the teeth have no influence as to their liability to caries. Differences in the density or in the percentage of lime salts have no influence as to their liability to caries.

"The active cause of caries is a thing apart from the teeth themselves, acting upon them from without; and, from a consideration of the facts thus far developed, the logical inference is that the cause of the difference in the liability of individuals to caries of the teeth is something in the constitution, operating through the oral fluids and acting upon the active cause of caries, hindering or intensifying its effects.

"Caries of teeth is not dependent upon any condition of the teeth, but upon conditions of their environment.

"Imperfections of the teeth, such as pits, fissures, rough or uneven surfaces and bad forms of interproximate contact, are all causes of caries only in the sense of giving opportunity for the action of the causes that induce caries.

"The objects that are to be attained in filling teeth are the perfect exclusion of the causes of caries from the tissues by sealing the cavity, and securing such form as will prevent lodgments of debris about the mar-

gins of the fillings and thus prevent the further action of the cause of caries.

"There is no basis for the supposition that some teeth are too soft or too poorly calcified to bear filling with gold or other metal in use for that purpose, since all are found to be abundantly strong.

"There is no basis for the selection and adaptation of filling material to soft teeth, hard teeth, frail teeth (in structure), or poorly calcified teeth. What basis there may be in the condition surrounding the teeth for the selection and adaptation of filling materials must be left to future developments to discover.

"With our present knowledge the only basis for the selection and adaptation of filling materials to classes of cases is the individual operator's judgment as to which he can so manipulate as to make the most perfect filling, considering the circumstances, his own skill, and the durability of materials.

"There is no basis for the supposition that calcic inflammation of the peridental membrane or phagedenic pericementitis (so-called pyorrhea) attacks persons who have dense teeth in preference to those whose teeth are less dense.

"There is no basis for the treatment of pregnant women with the view of furnishing lime salts to prevent the softening of their teeth or with the view of producing better calcified teeth in their offspring."

Dr. Kirk in his able article, "The Structural Characteristics of the Calcified Dental Tissues as Related to the Questions of Socalled 'Hard' and 'Soft' Teeth" (*The Dental Cosmos*, May, 1903), says: "I am fully convinced that the principal deductions made by Dr. Black from his extensive experimental study of the physical characteristics of the teeth are sound and trustworthy."

Differences in Teeth Structure

Viewing the summary from a strictly dental standpoint, there is no doubt but that both Doctors Black and Kirk are partly correct. That there is a difference in tooth structure all will admit.

I cite, as an illustration, the case of a strong, healthy young man of Irish parentage, 21 years of age, who has been under my care for some years. He is of more than ordinary intelligence, perfectly healthy and of an athletic build. His jaws measure 2 1-2 inches from the buccal surfaces of the first molars. He had thirty-two good, sound, hard teeth without a cavity. He contracted lues. In two years his teeth softened with rapid decay, erosion, abrasion, discoloration, and interstitial gingivitis. At the end of six years the disease has been arrested as well as the interstitial gingivitis, but the teeth still remain soft and the usual history of decay is progressing.

This is a typical but not uncommon case of hard teeth made soft by disease. It is a well-known fact that many people fifty years of age have thirty-two good, hard, sound teeth, without decay, who never use a toothbrush or mouthwash.

We have, then, the two extremes, hard teeth and soft teeth. Let us discuss Dr. Black's conclusions from a biologic instead of a dental viewpoint to see if we cannot obtain a different solution of the problem.

To review Dr. Black's conclusions, a ray of light is found in the first four, all that is necessary for our purpose.

Dr. Black admits that the teeth diminish in strength with advancing age; that when the pulps are lost, the teeth discolor, lose strength in a marked degree, apparently from deterioration of the organic matrix; that when the pulps have become so much calcified as to cut off nutrition the crown portions of the dentine lose strength apparently from deterioration of the organic matrix; that old people, and especially those in which much calcification of the pulps occurs, deteriorate in strength.

Changes in Teeth Due to Systemic Change

I purpose to show that all these conditions are brought about by systemic changes. Before taking up this part of the subject, however, let us first discuss hard teeth.

An examination of the teeth in skulls of the most ancient races shows a vast difference in structure and shape from those of

today. Ancient skull teeth have, as a rule, short bell-crowns, plenty of space in the alveolar process between the roots, are deeply set in the jaws, have flaring short roots, with thick alveolar processes. They are strong and fine-grained (these are points considered by scientists in determining the evolution of animals); nearly always 32 teeth in number; jaws measure 2 1-4 to 2 1-2 inches in diameter, differing with the nationality and environment. The teeth are rarely decayed, and when decay is observed it is usually only a dark line in the sulci of the crowns, scarcely ever at the approximal surfaces. The teeth and jaws are better developed, due to the greater use to which the ancient races put them.

Dr. G. Elliot Smith (Cairo, Egypt) says, in *The London Lancet*, in regard to decay of the teeth of the Egyptians 5,000 years ago: "Dental caries was rare among the people of lower social status and almost unknown in children. Among several thousand children found in ancient Egyptian graves only three instances of caries in deciduous teeth were observed." I have shown many times that the people of today, owing to disuse, have caused the teeth and jaws to degenerate.

The "Law of Compensation"

A law in evolution handed down from the early Greeks fits this condition exactly. Aristotle called it the law of economy of growth, whereby an organ or structure is lost for the benefit of the organism as a whole; Lucretius showed long ago how the strongest survive and the weak are laid low, i. e. the survival of the fittest; Lamarck called it use and disuse of structures; while Darwin, harmonizing these different views, called it natural selection, and Osborn, in the study of animals, termed it the law of compensation.

Interpreting this law to fit the case in hand, then, there is a struggle in evolution between the face, jaws, nose and teeth upon the one hand and the brain upon the other, as to which will obtain the most nutriment. The brain is evolving higher than the face, jaws and teeth, while the latter do less and less work, according to environment. Minot

says the face is a modification backward from the lower animals.

The brain gains in evolution at the expense of the face, nose, jaws and teeth, which naturally grow smaller and hence degenerate. Another factor to be considered is that structures like these, which are passing, are transitory and more easily affected by disease. Neurasthenia in the parent, and disease in the child, produce an unstable nervous system, resulting in excess or arrest of development of bones of the face, nose and jaws as well as affecting the structure of the teeth.

The Atavistic Tendency

Still another law in evolution, by which structures return to their original size, shape, strength and characteristics, is known in science as atavism and is called by the farmer "throw-back." By this law children reproduce the conditions of their ancestors. Thus a child does not resemble its parents in general outline or in a single structure or organ, but inherits characteristics of an ancestor. This ancestor may be four or five generations remote. Or the child resembles its earlier ancestors, the anthropoid ape with hair covering the body; the lower vertebrates, as the fish with clefts at the side of the neck, or where a cyclops is born with the pineal eye in the center of the forehead, like some lizards and horned toads. In like manner, it would be an easy proposition for a child to inherit the face, nose, jaws and teeth or any one or more of these structures from the primitive races. Patients who display a mouth with thirty-two well-developed teeth, without cavities, and who never use a toothbrush or mouthwash, are atavistic so far as face, jaws and teeth are concerned. This, then, is the source of hard teeth.

It has been shown that in the normal healthy evolution of man the jaws, teeth and alveolar processes degenerate for the benefit of the organism as a whole. The jaws now measure, on an average, 2 inches instead of 2 1-2 inches. In the anteroposterior diameter they have become orthognathous instead of prognathous, which makes it difficult for the jaws to contain 32 teeth. To compensate

for this shortness, the crowns of the teeth have become straighter, the roots do not diverge as much as formerly, the spaces between the teeth in the alveolar process have closed up, and the alveolar process has become long and thin, making it more susceptible to disease. To further compensate for this shortening, one or all of the third molars have been dropped in 47 percent of my patients. Added to this normal evolution, inherited or acquired diseases modify tooth structure, both external and internal, as observed in defective teeth and interglobular spaces. Diseased tissues cannot produce healthy dentine or enamel. All these changes cause the teeth to be more susceptible to external and internal influences.

Are There "Soft Teeth?"

If you agree with Doctors Black and Kirk and the writer, namely, that teeth diminish somewhat in strength with advancing age; that when pulps are destroyed teeth lose strength in a marked degree, and when pulps become calcified nutrition is cut off and the dentine loses strength; and that tooth degeneration occurs in evolution as already stated, then the remainder of the argument is clear.

Is there such a condition as soft teeth? We have shown that the face, nose, jaws and teeth degenerate for the benefit of the organism as a whole; that these structures are transitory; that transitory structures are more easily affected by disease than normal healthy structures; that neurasthenia in the parents and disease in the child will cause arrested development of any or all these structures. It is a well-known fact that hereditary syphilis and children's diseases cause a development of imperfect tooth structure.

If this be true, will not other constitutional diseases cause the same conditions? Under such environment, a third degeneration in tooth structure is all-important. The tooth-pulp is at its best when it begins to form dentine; as the pulp proceeds with its work, it goes to its own destruction, that is to say, it degenerates. Is it not then a splendid organ for disease, locked up in its

own cell without escape? After it has performed its office (that of forming dentine) it is in fit condition (senile atrophy) to take on disease.

Some years ago, with Dr. Latham, I made an exhaustive study of the dental pulp. These investigations were presented, at different times, before the Section on Stomatology of the American Medical Association. More than 4000 teeth were cracked open and 2000 specimens of pulps removed and placed in different fluids for cutting, staining and mounting for the microscope.

I was astonished at the number of diseases to which the pulp was subjected. Calcification was only a very small part as compared with other diseases which we found. Diseases of the blood-vessels and nerves of the pulp produce retrogressive changes of inflammation; abscess; cloudy swelling; fatty degeneration; mucoid, colloid, hyaline and amyloid degeneration; pulp-stones; spherites; neoplasms; fibroma, etc. I demonstrated nerve-endings in the coats of the pulp, blood-vessels showing the vasomotor system. The sympathetic system in disease, therefore, plays a part for good or evil in nerve-endings and blood-vessels of the pulp. I also demonstrated wallerian degeneration and nerve sclerosis, showing that changes in nerve-endings and nerve-tissue involved the pulp.

If, then, as Dr. Black says, calcification of the pulp causes deterioration of the matrix, and discoloration, and the teeth lose strength in a marked degree, how much more intense must be the action on tooth structure when disease of the blood-vessels and nerve-fibers with inflammation, abscess and all the other diseases enumerated are present.

The Cause of Dental-Pulp Disease

The question arose at the time these researches were progressing, when and what was the cause of so much disease in the dental pulp? It was found that when the pulp had finished its work it became senile. We know that the period of senility differs in different individuals. Some children are born senile. Children become senile at any of the periods of stress, at the eruption of

the deciduous teeth, at the eruption of the permanent teeth, at adolescence, and as age advances at the climacteric, and at about sixty when the arteries undergo a change; hence the teeth "diminish somewhat in strength with advancing age," as Dr. Black remarks.

When the functions of the body are abnormal from disease, inherited or acquired, it stands to reason that faulty metabolism and autointoxication must intensify the poisons in the blood, particularly at the periods of stress, hence the teeth discolor and soften as well. Is it not true that when the lungs, bowels, kidneys or skin become affected the teeth and alveolar process are involved? If we could examine the poor, old pulps we should find them badly diseased also, as the result of which the fibrillæ become destroyed, the organic matrix loses its vitality, the enamel-rods split off, and the enamel and dentine soften. Grief, worry, overwork, disease and pregnancy cause changes in nerve-endings and in the blood stream, bringing about disastrous results.

If, then, as Black states, there "is something in the constitution operating through the oral fluids and acting upon the active cause of caries, hindering and intensifying its effects," why does this "something" not cause changes in the internal secretions and the blood and thus in disease lower tooth resistance and make it much easier for the oral fluids to act with greater intensity upon tooth structure? From a continued clinical experience for many years it is entirely reasonable to conclude that this seems to be the case.

Is It a "Difference in Method of Observation?"

Dr. Kirk, in his article from which we have already quoted, says: "The differences of opinion as expressed in Dr. Black's conclusions on the one hand and those of the great body of clinical observers on the other may, I think, be fairly attributed to the differences in method of observation respectively employed in dealing with the question of the physical characters of the teeth."

It is the differences in method of observation, or rather an entirely different view-

point from which Dr. Black's conclusions are discussed in this paper. As practitioners of dentistry we are reminded every day that there is a vast difference between hard and soft teeth. While it is possible that there is not so much difference but that filling material well applied will partially prevent decay in both classes of teeth, we all know that a tooth which has lost its fibrillæ or pulp cuts differently from one that has a normal, healthy pulp. A pulpless tooth has not the resistance that a healthy tooth possesses.

No set experiments, to my knowledge, have ever been made to demonstrate the relative value of filling materials in the two classes of teeth. I believe, if the question were put to each practitioner which class of teeth would resist decay the best under a given filling material, nearly or quite all would say, the tooth which is normal.

A typical illustration of soft teeth is that of a 27-year old traveling salesman, one of my patients, who had a severe attack of jaundice one year ago. He came to have his teeth put in order. I found they had become yellow and soft; decay was progressing rapidly about fillings; in excavating the cavities there was no pain; the fibrillæ were destroyed; if the pulps could be examined they would be found diseased and receding in the pulp-chamber.

Yellowness of Teeth and Disease

It is not uncommon to find soft temporary teeth quite yellow, decaying rapidly and fibrillæ and pulps destroyed. Master J. S., 7 years of age, had measles at the age of 5. Recovery was slow; at 7 he is not strong. The permanent first molars, centrals and laterals are in place and are of a fairly good quality. The temporary cuspids, first and second temporary molars are soft, decay rapidly, pulps are reached without pain, and the teeth are quite yellow.

I have a record of a number of like little patients. They have all had eruptive fevers and some have inherited disease. How do Doctors Black and Kirk know that "these variations are, as a matter of fact, extremely limited in degree?" Is it not true that the physiologic and pathologic condition of the

tooth under disease and death of the pulp is just as great as in any other tissues of the body according to its structure? Dr. Kirk's fine illustrations do not show a relation between living and dead teeth, so we lose the contrast of the two conditions under the microscope or by polarized light. The results obtained microscopically in senile teeth as well as in pulpless teeth, are at present unsatisfactory. No comparison can, therefore, be made under such conditions with normal teeth, with the microscope, by our present methods.

The method of observation of the great body of clinical observers is not from the mechanics of tooth restoration, but from its own physical condition. It makes little difference from this view-point how much or how little variation there is in density, hardness or chemical composition. We know that the fibrillæ are destroyed under certain conditions, that the teeth cut easily, that there is an odor upon rapid cutting, showing decomposition of animal tissue, and that there is little or no sensitiveness of dentine in many cases, even when the pulp-chamber is reached.

I must offer a different interpretation of the conclusions of Black in regard to tooth structure. The temporary as well as the permanent teeth change their physical characteristics, become soft and do not resist decay as readily as those in which systemic diseases are not associated.

Autointoxication Causes Softening

Systemic changes in autointoxication produce tooth softening, which is the foundation and great cause of erosion and abrasion and influences decay. The best illustration of tooth softening, discoloration, erosion and

abrasion due to autointoxication is in those pathologic conditions in which the central incisors, either upper or lower, or both, are alone involved. The poisons of the blood circulate to the very end of the blood-vessels, and here is a splendid illustration of nerve-end and artery degeneration. It is also an exposition of the very earliest symptom of autointoxication, very often earlier than interstitial gingivitis.

Analysis of the blood does not give reliable information as to the changes in chemical composition. We must, therefore, depend upon the excretions of the body and the behavior of the different organs, such as the heart, liver, kidneys, bowels, etc., for information. Urinalysis should be made. The quantity of urine passed in twenty-four hours must be estimated. If the acidity be abnormal, if indican be present, if 48 ounces of urine be not passed in twenty-four hours, those conditions must be corrected. Heart pressure and the condition of the bowels must also be considered.

The physician pays little attention to these early conditions because the patient is walking about and attending to his affairs. If the disease had progressed to such an extent that some vital organ or tissue had become involved, the physician would consider that he had good reason for professional interference.

Interstitial gingivitis, diseases of the pulp, death of the fibrillæ and of pulp, producing discoloration, tooth softening, erosion, abrasion and rapid tooth decay, are very early symptoms in autointoxication.

The study of hard teeth and soft teeth as well as of all other structures and conditions of the mouth are worthy of a broad interpretation.

I BELIEVE in work. I never forget for one moment that time is precious. I never forget that the sun does not stand still, and if a man is not careful, the sun will leave him with his work unfinished. It is easy enough to accomplish something if you set out for it in earnest.

—F. Hopkinson Smith

Personal Experience in Weight Reduction

How One Physician Treats Himself for Threatening Obesity

By W. F. RADUE, M. D., Union Hill, New Jersey

EDITORIAL NOTE.—Dr. Radue describes in detail the dietetic regimen and the system of exercising which have enabled him to keep down a tendency to excessive body weight. Some attention is given to the drug treatment of obesity, but this is developed more at length in Dr. Ernest F. Robinson's article on the same subject, which follows this one.

THE amount of adipose tissue possessed by man or woman is largely a matter of individual or family tendency and has little to do with diet, exercise or habits of life, in the majority of cases. Nevertheless, it is a fact that the habit of after-theater suppers and the free indulgence in malt liquors and sweet wines, also the habit of eating between meals and the nibbling of nuts and sweets will surely increase the weight of those that have this tendency to such a degree as to make them uncomfortable, and if not checked will eventually bring on all the train of disagreeable symptoms and complications so well known to the experienced doctor. The remedial methods used by me to combat this condition of adiposis were various, such as starving, bathing and exercise. Medicine was never prescribed by me for this purpose as I did not and do not now believe in giving drugs here. I have known several people who were treated by drugs during my time by other physicians and not one of them remains to tell the tale of how they were drugged to death.

The Tendency to Obesity

That arsenic iodide, thyroid gland, phyto-lacca, besides a few other drugs will reduce redundant weight is not disputed, but with prolonged use the results will be as mentioned. The weight of the average man or woman except in rare cases can be decreased about 10 percent, and in a few cases some 15 to 20 percent, by such means as dieting, exercise and baths. As a rule the fat man or woman tends to stay fat as the lean man or woman remains thin or lean. In 90 percent of the cases of obesity encoun-

tered it is an inherited trait, perfectly compatible with health, comfort and efficiency, and the fat is hard to get rid of to any marked degree.

That the danger of excessive fat, especially in the upper part of the body, will, in some persons, cause trouble with the respiratory organs and heart does not mean that this applies in every instance of stoutness in that region, the sole disadvantages being the additional weight, while the added stoutness of the abdomen makes "navigation" somewhat slow and tiresome.

Most of the evils which men and women who are growing stout attribute to their fatness are due not so much to the fat itself but to the sluggish habits which have preceded and exaggerated their corpulency. They take no exercise and consume too much food for the muscular work done, and there is too much remaining indoors with so little of brisk walking or other open-air sports.

The Methods of Reducing Weight

Now as to the various means and methods of reducing excessive fatness, I will divide them into three classes, namely, dietetic, mechanical and medicinal. The drug-method has not made a very favorable impression with me, this, as before mentioned, being due to their toxic action and permanent damage done the patient, the cure being worse than the disease. On the other hand, the dietetic and mechanical methods are decidedly beneficial when applied with reason and under the guidance of the doctor, the latter being best able to decide the amount and kind of exercise to be taken, including regulation of the diet. Do not forget: plenty

of exercise and out-door life are indispensable for the reduction of weight.

Here let me say that one must not be surprised if after three months' active exercise and dieting he finds that the patient has lost very little or no weight. In some cases six months will pass before good results begin to show, still, after about four weeks of this regimen the patients will notice that they feel better and lighter and have more endurance power than they formerly had; some even think they have lost considerable weight, but if put on the scales we find their weight unchanged.

The Value of Exercise

The various exercises proving helpful are horseback riding, bicycling, weight pulling, use of dumbbells, bag punching, walking, fencing, ball playing, dancing, turning and swimming. To these I add bathing and sweating. These are all good and may be indulged in according to the amount of time available and the ability of the patient to perform and his standing financially for acquiring the various appliances.

But, after all, the one exercise fully answering all purposes is walking, the greatest expense involved being a good pair of well-fitting walking shoes with medium, not too heavy, soles. Begin with walking a mile a day for one week, then two miles for the second week, gradually increasing the distance to five and ten miles a day. After you have become accustomed to these longer walks you will be so anxious to take your daily stroll, and the distance covered will pass so quickly that when you return you will feel like starting out for another trip. That, at least, has been my own personal experience. This walk should be taken before breakfast or three hours after. It should be a brisk walk, say five or ten miles covered by an average individual in one and one-half hours over all kinds of roads. I, myself, am taking a daily walk of six and one-half miles over a country road in one and three-quarter hours, after which I take a cold shower and a good rubbing down with a turkish towel, thereby keeping my weight within the normal limits.

For those having a weak heart it is self-evident that they must take exercise within their endurance power and under the supervision of their physician.

The Diet of the Obese

In reducing weight by diet great intelligence and care must be exercised. The object is not to take less food but to cut out excessive sweets, pastry, potatoes and bread. These articles should be greatly restricted, as should also green vegetables that grow above the ground, and fruits. For meat, lean mutton, lamb, beef and poultry are permitted, while pork is taboo. No water must be taken with meals. However, one should drink a glass or two of water one hour before or three hours after meals. This is necessary to flush the kidneys. Malt liquors and sweet wines are interdicted, although people accustomed to wine with dinner may have a small glass of claret and water. The patient should eat three regular meals a day, but avoid overeating, and not eat between meals; for to eat just enough to satisfy is ideal in the treatment of obesity.

The sweating process for the reduction of superfluous weight is dangerous and must be employed with caution. This is due to the fact that most of the methods of producing profuse sweating are based upon the application of a high degree of heat, as in the hot and steam-room of a turkish bath, which very often is deprived of the proper amount of fresh air. This prolonged and excessive heat increases rapid chemical changes in the body, with the result that the fat is rapidly burned or melted down and gotten rid of by means of perspiration and through the kidneys. Although this method breaks down fat it also has a similar effect, but in a less degree, upon the muscles, heart, nerves and secretory glands, doing harm and often leaving the patient in a weakened and depressed condition, with impaired appetite and broken sleep.

Reduction by means of massage is less objectionable because this manipulation can be applied just where most desired in particular regions, as the waist, abdomen,

neck and chest; but to do this without preceding muscular exercise is only a lazy way to take exercise and will avail but little in reducing weight. Active muscular exercise, restriction of diet to the proper amount, short hot baths followed by a cold shower

after exercise, or a cold shower without the hot bath, and in addition an occasional saline laxative to clean out the entire intestinal tract, are the essential points to remember for those undertaking the reduction of excessive weight.

Some Experience with Obesity Treatment

By ERNEST F. ROBINSON, M. D., Boston, Massachusetts

EDITORIAL NOTE.—While Dr. Robinson takes up the matter of diet, to which he gives proper emphasis, he particularly dwells upon the drug treatment, the possibilities of which he very clearly shows, giving the methods which have brought him success.

THERE are few conditions that the average woman dreads more than she does obesity. In most cases this is not due to its effect on her health, but purely because of the way it effects her looks. As a matter of fact the majority think that they are unusually healthy.

Judging from what patients of this class have told me, I am of the opinion that the average physician either does not recognize that obesity always is a disease or else that he does not know how to treat it. The consequence of this is that the patient consults someone who does claim to be able to remove her surplus adipose—generally the advertising faker. There is no question that these men do reduce obesity, but only seldom permanently.

Obesity Is Readily Curable

It is this fact, perhaps, that has made the average physician of the opinion that nothing can really be done to cure obesity permanently. But this is a mistake. Except in the late stages, when fatty metamorphosis has occurred, I know of no disease more certain of a cure.

Mere stoutness is not obesity, and the fatness itself is not obesity, in any case, but merely one symptom of it, and in reality the least important, although you will never be able to persuade patients of this fact. Every physician knows what is the normal weight for each height. A condition of stoutness which does not exceed 20 percent in excess of this normal average is not obesity and does

not need treatment as such unless the patient is rapidly gaining. I believe that whenever there is an excess over this 20-percent limit the individual requires treatment, and the sooner he gets it the better.

Obesity is strictly a disease due to improper nutrition. Its causes are, in most cases, exactly the same as those which in other patients determine thinness. Just why this is so, I do not know; it is a matter of the personal equation of the patient. I do know that in many cases I have reduced obesity with the same remedies which have been used to cause a gain in weight in other patients.

Conditions Favoring Obesity and How to Remove Them

In every case of obesity you will find either poor digestion, improper assimilation, or deficient excretion; usually all of them. The form of the indigestion is usually that of the intestinal kind, that is, imperfect digestion of fat, sugar or starch. Autotoxemia is almost invariably present to a greater or less degree. All of the organs of excretion may be at fault, but the bowels are most commonly to blame. Chronic constipation is so constantly present that it can practically be taken for granted—bearing in mind that occasional attacks of diarrhea are common in chronic constipation, and are, therefore, not an indication that that condition does not exist.

In treating a case of obesity, the first thing to do is to ascertain the exact condi-

tion of the excretion by the lungs, skin, liver, kidneys and bowels. Some of these will be found to be sluggish while others will probably be working to excess. The skin usually works overtime, so to speak. Learn also about the digestion and especially about the usual diet of the patient, both as to kind and amount.

To cure any disease we must, in the first place, remove its causes. The great trouble with the average obesity treatment is that the fat is considered to be the disease and all efforts are directed toward its removal. Mere fat is not obesity, and its forced removal is worse than useless—it is always harmful. Aside from the late symptoms due to fatty degeneration of the heart, the most dangerous condition in obesity is the enervation. Forced reduction increases enervation, hence will invariably make the patient worse. Pay no attention to reduction *per se*. Remove the causes of the trouble—the improper digestion, assimilation and excretion—and nature will take care of the surplus fat.

The Two Classes of Cases

For the sake of convenience, obesity-cases may be divided into two classes, namely, those with considerable indigestion and those with little or none of this symptom.

If constipation is marked and there is much trouble from indigestion, with intestinal fermentation, palpitation of the heart, and the various symptoms of auto-toxemia well marked, my usual treatment is as follows, at least for the first month or six weeks:

Clear the bowels thoroughly. For this purpose give calomel, podophyllin and epsom salt in approved combination, one dose every half hour for from four to six doses. Two hours after the last dose give a teaspoonful of salithia, repeated if necessary every two hours until the bowels are clear. In some instances this treatment may have to be repeated next day, or the day after, perhaps even occasionally for several days. Clear the bowels thoroughly, that is the main point. When the bowels are clear the stools will be without foul odor.

During this clearing-out process I usually give one of the intestinal antiseptic combinations of the sulphocarbolates, one dose every two hours if necessary. In any case belonging to this class of obesity I usually give one dose of these intestinal antiseptic tablets at least four times a day. When there is much indigestion I give three before each meal of the "digestive" tablets, containing, each, strychnine arsenate, gr. 1-134; quassin, gr. 1-67; papain, gr. 1-3. If indigestion is not a marked factor these are not necessary, but if so, neither are the intestinal antiseptic tablets.

I have found that, as a rule, if one is indicated the other is. For the constipation, after the clearing out, I use the anticonstipation granules, Waugh's alkaloidal formula.

The other class of obesity cases, what may be called the milder class, do better on a different treatment. It will be understood, also, that the severe class just mentioned will, after a little, come under the head of the mild class, hence will, usually, change to the following treatment:

Control the liver, kidneys and bowels with salithia. Give one of the obesity tablets (colchicine, gr. 1-250; strychnine sulphate, gr. 1-67; berberine hydrochloride, gr. 1-67; caffeine, apocynin and alnuin, each gr. 1-6; phytolaccin, gr. 1-2; oil bitter orange peel, m. 1-24) from four to seven times a day. In most cases I give one dose before meals, one after meals, and one at bed-time, seven a day in all. Sometimes I give, instead, one of the obesity combination four times a day and one intestinal antiseptic (sulphocarbolates) four times a day. With this last class it is usually advisable to use the anticonstipation granule in place of the saline laxative also, owing to the fact that there is more constipation.

If rheumatism, sciatica, lumbago, or any form of neuralgia is a marked feature with the obesity, as is often the case, I give, in addition to the other remedies that seem indicated, a dose of calcalith, three or four times a day.

The important point in the medicinal treatment of obesity is that routine treatment

is impossible. You must know what you are trying to get rid of and adapt treatment so as to do the work.

Let me say here that I consider "obesity" a very unfortunate name for this condition, since it makes even doctors think that the fat is the disease. So long as the retained waste *must* stay in the system there is no safer form that it can take than fat. When you remove the real causes of the disease, the improper digestion, assimilation, and excretion, nature will remove the fat; and it cannot be removed permanently until you do remove these causes, and keep them removed.

The Problem of Diet

Now as regards diet. This is an important part of obesity treatment, but not in the way usually preached. Banting, or any approach to it has, in my experience, never done the slightest good, and I have seen it do a great deal of harm. Starvation is not only not necessary but it is invariably harmful. It increases enervation. Cutting down the supply of water to the lowest possible limit is nonsense, you cannot eliminate properly unless you have enough water in the system to keep the waste in solution. I believe that I have had to instruct more patients to drink more water than less of it. I have seen a few patients who drank too much, but they are the exception.

It is not so much *what* these patients eat as the *way they eat* it that does the harm. Most of them do not *eat* their food, no, they bolt it, swallow it whole much as a dog does meat. If you can teach an obesity patient to masticate his food as it should be, he (or usually she) may eat practically anything the appetite calls for. It may, possibly, in severe cases, be advisable (though perhaps not absolutely necessary) to limit fat-forming foods somewhat, but don't prohibit them.

First, no obesity patient should think it *necessary* to eat a regular number of meals a day. Absolutely nothing should be eaten at any time unless there is a *real* appetite. This does not mean faintness, "all-goneness," emptiness, headache, or any painful sensation. It means an "appetite," a pleasing

desire for food, a hunger that would make dry, stale bread and cold water taste good.

Given this normal appetite, let the patient select any one or *at most two* kinds of food that the appetite calls for. This food should be chewed until it is liquid before being swallowed. Any part of it that cannot be so reduced to a liquid *must be rejected*. If swallowed, it simply creates indigestion and increases metabolic waste. Eating must be stopped the *instant* the real appetite is satisfied. Here is where, in hard cases, I advise eating not more than *one kind of food*, at any one meal, for the reason that variety will tempt the appetite, create a false appetite, and this is just what we do not want. The patient must not eat again, of any food whatever, until there is again a *true appetite*. It does not matter in the least whether this means one meal a day or six: get the appetite before eating, eat properly, and stop as soon as the appetite does.

If this regimen is followed to the letter, the patient may eat any kind of food that is desired, and may eat all that is needed, not only for strength but for the true appetite. Yes, I know this is Fletcherism, but it does the work.

If a patient's weight has been very much in excess of the normal, I do not consider it policy to try to force reduction. At the same time, if such persons will gradually reduce, without forcing to the normal, or even below it, let them do so. Do not force, that is the main thing. Let nature do the work, she knows her business.

After reduction is accomplished convince the patient, if you can, that it is worth while to live and eat properly so as to keep right. If any patient is fool enough to suppose that all the bad habits that caused the disease in the first place can be resumed without causing it again, why, there you are—you all have had them, of course.

I am satisfied that with proper treatment, and patient willing to follow advice somewhere to near as given, any case of obesity that has not reached the stage of fatty metamorphosis can be cured, to stay cured if the patient will live right afterward.

Nature's Forces in the Cure of Disease

By H. C. KIBBIE, M. D., Litchfield, Illinois

SHOULD one of our forefathers visit the earth today, what would be his astonishment. Turning a button he floods the house with light. Over the 'phone, in a second of time, he talks with people miles away. He sees the speeding automobile. He notices with astonishment that messages are sent without wires. With the Roentgen-ray he looks through objects opaque, and scanning the heavens dirrigible balloons and aeroplanes burst on his vision.

These things are the results of scientific research. And yet they are not marvels. They are the merest trifles compared with what one day we hope to accomplish. Notwithstanding what we have done, we are but in the infancy of our powers to fathom the depths of nature and learn her secrets. We are groping, but although in the dark, we shall unravel, tether by tether, the mysteries of the unknown.

Our senses are limited to five. O, that we had a hundred! At present we cannot comprehend the one-millionth part of the hidden resources of nature. We never discover anything until the force that is responsible for it has come in contact with something we can either feel, see, hear, taste or smell. But advances are being made along all lines and especially in the methods by which disease is treated.

Tremendous Gains in Therapy

Some of the most distinguished men in the medical profession have openly questioned the value of drugs in sickness, and many confine their endorsement to a half dozen so-called "specifics" which they are sure have proven of value in certain "specific conditions"—of these the use of quinine in chills is perhaps the best illustration. Their claim is, that only a few drugs, those seemingly having a selective action upon certain organs, have proven of *unquestioned* medical value, and the rest are as yet on trial.

Osler, the most distinguished medical man of modern times, is called a "medical nihilist," because, forsooth, while the author of works on practice and writing learnedly and extensively of disease, he avoids questions of medical treatment.

While that faith and confidence in "dosing" which possessed our forefathers has to a great extent been lost, we have none the less made tremendous gains in our knowledge of the successful treatment of disease. Medical practice has broadened. It embraces all the elements in nature, and though using less of drugs, and these of a more direct and positive action, it also employs with success physiological, mechanical and psychological methods a few years ago unthought of. All the light which nature and science have shed upon the world is being applied to medical practice today. Success, wonderful success from these new lines of medical thought, has resulted.

A vast number of diseases which until the advent of the alkaloidal granule had been treated only with more or less nauseous and unsatisfactory compounds, are now easily relieved and promptly cured by the use of nature's forces alone, or aided by drugs that are no longer disgusting mixtures of multiplied and many times antagonistic medicines, but are minutely fractional doses of a single pure alkaloid precisely directed to meet a precise indication. Thus medical practice has become revolutionized, and the results of practice have become more certain and satisfactory, in fact the forward strides of medicine are now equaled only by the advances of the last few years in surgical procedure.

Changes in the Treatment of Disease

It is interesting to note the great number of diseased conditions now treated—agreeably and successfully treated—by some one or more of the force modalities of nature, aided and assisted by the employment of the

delicate and potent alkaloids. Unless your attention has been called to it you can scarcely realize the extent to which this change in the treatment of disease has obtained among studious, thoughtful and scientific members of the medical profession. From my own personal experience I could cite many cases of diseases of differing characteristics, cured by the use of the natural forces and in some cases entirely without the intervention of drugs.

I shall say nothing about the common ailments and minor difficulties which are easily handled by ordinary medical means, but shall call your attention to those conditions which are most unsatisfactorily treated by the profession, for the reason that the results in this class of cases will best indicate the power and value of the natural forces in the cure of disease.

It is well, then, to know in advance what are the natural forces of which I shall speak, hence I will enumerate them, viz.: Electricity, Heat, Light, and Motion, or Mechanotherapy.

Under Electricity we shall consider the static, galvanic, faradic and high-frequency currents. Under Heat, all forms of thermic baths. Under Light, the x-ray and the different thermic and spectrum-rays.

Mechanotherapy being, according to Juettner, a collective term which includes all forms, methods and systems of exercise and of manual and instrumental manipulation of the tissues of the body, will therefore embrace exercise, Swedish movements, massage, orthopedics, osteopathy, vibration and oscillation.

Electricity: General Statement

All animals are electrical machines: brain and body form the battery, while nerves correspond to wires. Sensation is electric. The life-principle everywhere is electrical. The blood may be considered the exciting fluid and the nerves the wires. The Electric Age is here, in medicine as well as in other matters.

Instruments.—For satisfactorily employing the forces of nature in the cure of disease we must be provided with proper instruments

for utilizing these forces. They are few in number and consist of the following:

The Static Machine.—First and foremost among electrical instruments, it is too well known to require description. I agree enthusiastically with Dr. Monell, who says: "Considered from every standpoint, a successfully operated static machine is without doubt the most surprising therapeutic weapon in the whole arsenal of scientific medicine."

The Galvanic-Faradic Cabinet.—Next to the static machine stands this most indispensable of instruments. It should be provided with a rheostat for controlling the current, a milliamperemeter for determining its strength, a coil for the coarse and fine faradic currents, and a rheotome for breaking the current at regular intervals. If, at the same time, it embraces the sinusoidal current, this will also be found of advantage in special cases.

Therapeutic Light.—Some form of therapeutic light is necessary in order that you may make use of the several spectrum rays found to possess valuable curative properties. A study of the literature of light as used in medicine will assist you in determining the kind which will most satisfactorily meet your demands. So many and varied are the diseases to which the therapeutic rays are applicable, that by many they are considered equal in value to the ordinary electric currents, and by some at least would be given first place in the armamentarium of force-modalities.

Electric-Light Cabinet.—The incandescent globe is rich in thermic rays, and a cabinet provided with these lights will demonstrate its importance as a physiologic and therapeutic agent, not only augmenting absorption, increasing appetite, and producing copious diaphoresis, but by its destructive power over disease germs and its stimulating effect upon physiologic metabolism. It is by all means the most agreeable, efficient and satisfactory form of thermal bath.

The Vibrator.—Juettner, in his "Modern Physiotherapy," says: "It is only by vibration that the forces of nature become manifest. Organic function is vibration. Nerve-energy is vibration. There is no life with-

out force and no force without vibration. Vibration is the elementary basis of all biology." This being true, its importance is evident. Vibratory stimulation is a feature of mechanotherapy and can be very satisfactorily effected by the hands of a trained operator; but there are many conditions in which an instrument actuated by the electric current will prove much more satisfactory than the hand. It should be borne in mind that vibration is produced by a long stroke and heavy pressure, stimulation by light pressure and short stroke, and vibratory stimulation by moderate pressure and stroke.

Hot-Air Apparatus.—The action of moderate degrees of heat is not the same as the action of heat of high intensity. The advantageous use of hot dry air requires that it shall reach a temperature of from 200° to 400° Fahrenheit. Such a temperature contracts the arterioles, this action being followed in a very few minutes by dilatation and an agreeable flush. It relieves pain and muscular spasm, stimulates the cutaneous nerves and the lymphatics, and gives a glorious sense of well-being. The Betz hot-air apparatus, while inexpensive, will be found admirably adapted to the purpose for which it is intended.

Electrodes.—In connection with the electric machines enumerated, there will, of course, be required, the necessary electrodes for the proper administration of the currents. These vary in form in accordance with their adaptation to special uses. Among those absolutely demanded a set of the ultraviolet-ray electrodes must be included. These are cheap and easily obtained.

Miscellaneous Paraphernalia.—It is presupposed that a physician in general practice will be provided with the ordinary instruments of physical diagnosis. You should by all means be possessed of such electrically lighted speculums as the different cavities of the body demand. You should also have an electric head-light, and if you do any nose and throat work you will need a compressed-air atomizer. Provided with the instruments herein designated, and a volume of Juettner's "Modern Physiotherapy," you

will be in a condition to demonstrate to your own satisfaction and that of your patients the value of nature's forces in the cure of disease.

Utilizing the Forces

We are now in a position to take up the treatment, but before going farther I desire to caution the tyro in physiotherapy against becoming a ridiculous enthusiast. Don't, for a moment, think that the force-modalities alone will cure anything and everything at all times. Don't undervalue the assistance of properly selected remedies. Don't discard tried and proven medicines while using the natural forces, but rather use the one as an adjunct to the other, and in this way find yourself doubly armed. There is scarcely a complaint in which the properly selected alkaloid will not prove a helpful auxilliary to the use of nature's forces and promote rapidity of cure.

Bright's Disease

This is one of the most serious of human ailments and is usually considered hopeless. However, the fact that many remarkable cures have been effected with static electrification is now fully established. Static electricity is an equalizer of the circulation and a great eliminator of morbid products. Dilating the capillary vessels and stimulating exosmosis, it sets up millions of vibrations which traverse the affected tissues and produce needed corpuscular motion. Electricity has been used in this disease only in very recent years, and it is in the real old prospectively fatal cases and not in the acute ones that good results have been obtained. The proofs are on record, have been thoroughly established, and they cannot be controverted. No harmful results can accrue from the treatment by electricity, and only in electricity is there hope, for it is a well-recognized fact that by drug-treatment alone all these cases go on to death. Physicians who scout this treatment do so because they have not investigated and are ignorant of results.

Electricity, in these cases of renal disease, reduces the inflammation, equalizes the capillary circulation, absorbs exudates, opens

up the uriniferous tubes and glomeruli, and the effect in many of these cases is truly wonderful. Cases too far advanced you cannot hope to *cure*, but taken early, you may checkmate the disease and postpone the undertaker's call for years. The disease is distinctly of nervous origin, and when the splanchnics and spinal cord become impaired it must be through the splanchnic and spinal nerves that the kidneys are reached and affected. What is so likely to effect this result as the electric current?

It is a noticeable fact that ministers, doctors, lawyers, board-of-trade men, and persons who keep themselves under mental strain and excitement, are the ones affected by Bright's disease. Laborers almost never have it. This disease belongs to those who constantly exhaust the sympathetic nervous system, and therefore, if to be cured, it must be reached through the great central nervous system where it originates. Static electricity, which is able to contract a pupil dilated with atropine, has a most direct and decided influence upon the central nervous system and is the only thing which will satisfactorily reach and modify the action of these affected nerve-centers.

Some Nervous Diseases

Locomotor Ataxia.—Unfortunately no form of treatment, up to the present time, has been recognized as reliable and satisfactory. Speaking of the use of electricity in this disease, Dr. S. H. Monell (than whom there is no better authority) says: "Static electricity will do more to relieve pain and maintain a degree of comfort than all other agents." The continuous currents, static spray, sparks to the spine, the electric brush, hydroelectric baths, and light-rays to the spine, have all been found of value. Massage to the spine has been found of decided value in certain cases, and special coordination exercises will assist greatly. One case, that in connection with the treatment here outlined, was placed on chromium sulphate, 4 grains four times daily, and has apparently fully recovered.

St. Vitus' Dance.—Electricity bears a most satisfactory reputation in this disease. The

galvanic current and the static currents, all serve admirably in controlling the erratic nerve-storm, as do the light-rays to the spine, and massage of the spine as ordinarily performed, or performed by the use of a mechanical vibrator. In the treatment of these cases the properly selected alkaloidal drugs will be found to assist greatly in securing promptness of cure.

Epilepsy.—The continuous current—negative electrode to the feet and positive mobile to the spine—I have found to be of decided benefit in this disease. Central galvanism and general faradization afford relief to a decided extent in the majority of cases. The violet light to the spine, daily, works wonders at times. Remember to search for the cause and let your treatment be suggested thereby. In these cases the properly selected alkaloids will greatly assist in obtaining satisfactory results and their use should not be neglected.

Shaking Palsy.—I do not think it is safe to promise a cure in paralysis agitans, but I do know that I have never seen a case that I could not benefit. I personally know of cases that have apparently fully recovered under alkaloidal treatment reinforced by central galvanism and static insulation. Mechanical vibration to the spine and the affected muscles often proves of great value, and the use of the violet light to the spine daily for fifteen minutes gives, at times, most satisfactory results. The trouble with these cases is that they are prone to recur upon overexertion or the least irregularity of life. In this disease I have had the best results from prescribing, in connection with electricity, alkaloidal medication with hyoscine hydrobromide, gr. 1-500 to gr. 1-250, from three to four times a day, gradually dropping off 1-1000 grain as improvement in the conditions warranted. The results have been surprisingly happy.

The Genital Diseases

Gonorrhea.—Very troublesome cases of this disease, in the male, I have seen to yield readily to the application of water by hydrogalvanism. Electricity used externally I have found to relieve pain and diminish congestion after acute inflammation had sub-

sided. The therapeutic lamp I have found very valuable in acute cases, as the light-energy easily penetrates the tissues to the seat of gonococcic infection, a point that an ordinary injection often fails to reach. In the female the great majority of cases are primarily urethral, and should be treated promptly to prevent the extension of the disease. In these cases of urethritis nothing equals copper electrolysis. Use the Neiswanger cataphoric urethral electrode, positive pole and continuous current, 5 to 10 milliamperes for five minutes. If thought best, a 4-percent solution of cocaine may be used to anesthetize the urethra previous to the introduction of the electrode. Results will often be advanced by the use of such antiblennorrhagic remedies as the case seems to demand.

Gleet.—Some cases that have lasted for years and that have been subjected to all the orthodox treatments, I have found to yield promptly to a mild galvanic current.

Seminal Emissions.—These are usually due to reflex irritation from some central or peripheral cause, and they demand either the sedative, stimulating, tonic or equalizing effects of electrification. It is my opinion that the properly selected electric current will do more to relieve these cases than any medicine, but at the same time the indicated alkaloidal remedy will greatly assist. Where the cause is psychic the high-frequency vacuum electrodes will be found valuable. Not only will the current itself have a decidedly curative action upon the urethral membrane, but the play of currents in the glass urethral electrode will profoundly impress the mind of the patient and greatly promote a cure. Under this treatment the melancholy visage that first confronted you will glow with the sunlight of hope, and when this occurs, the battle is half won.

Where there is true urethral hyperesthesia you must expect far-reaching complications. From it will arise a host of troubles, e. g. dyspepsia, palpitation, neurasthenia, melancholia, and loss of vitality. Give the patient a "cheer-up" talk. Use cold sounds. Use the common insulated urethral electrode with galvanism, negative to sound, and posi-

tive to hand of patient. Employ a current strength that will give no pain or unpleasant sensations, for five to ten minutes at a seance. As the patient improves, use the fine faradic current occasionally. Build up the patient with the triple arsenites and nuclein.

Impotency.—In my hands no treatment has proven superior to mechanotherapy. Manipulation and vibration from the first to the fifth lumbar vertebra will reach the nerve-centers, controlling the sexual functions in both sexes. The manipulations should either stimulate or inhibit, as the characteristics of the case demand. The galvanic currents and the faradic currents are valuable. Galvanism promptly increases the supply of semen in the same way that it increases all other secretions. Where desire is lacking, and results are incomplete and unsatisfactory, especially if there is a moist, cool, flabby condition, the use of almost any of the stimulating electric currents will result in improvement. Where the condition is the result of obesity, exercise, massage, the incandescent-light cabinet, spinal showers, and diatetic and hygienic treatment will be demanded.

Stricture.—By the use of the electric currents all forms of stricture are treated with the full measure of success, and some varieties of stricture yield to no other system of treatment so readily. Cutting of strictures is almost never demanded when the diseased condition can be reached by the negative galvanic current. No genitourinary specialist is up to date that does not understand the simple and certain treatment of stricture by electrolysis. It is devoid of pain and universally satisfactory in results. The technic of this treatment can be obtained from any textbook on electrotherapeutics. Thiosinamin, a comparatively new remedy, is now being employed with marked success in the more-severe forms of fibroid strictures, and its value in these cases should not be overlooked. It may well be employed as an adjunct to proper electrical treatment.

Enlarged Prostate.—This very troublesome and serious disease is treated with the great-

est success by galvanic cataphoresis. It is so certain and so uniformly satisfactory, that the dangerous operation of extirpation of the gland is almost never advised by those who have had experience with the galvanic current in these cases. The cataphoric treatment by the use of Neiswanger's prostatic electrode has proven one of the greatest advances in genitourinary practice. Good reports of the effects of the several caloric and chemical rays are also now being made. The blue rays are said to overcome the spasmodic pains, lessen the flow of urine, and relieve the state of tension under which the patient suffers, and many cures are reported as having been effected.

The chronic enlargement of the prostatic gland is not a true hypertrophy, but, like a stricture, is the result of an inflammatory process to which the accumulation of tissue is due. I have seen no account of the use of thiosinamin in these cases, but if it is a lymphagog which attacks leukocytes and produces local hyperemia, I am inclined to believe that a new field opens up for its use in prostatic troubles.

Old-Age Infirmary

The assimilative powers of the aged are at a low point, and the results of stomach medication are not as reliable as in those of more vitality, and it is in this class of patients that the forces of nature can be best relied upon. Here electricity is the great agent. No method of treatment elicits such expressions of satisfaction, no remedy is so swift and permanent in its action. The static insulation current used in these cases will both astonish and delight you. Never lose sight of the fact that nothing promotes degeneration of vitality so much as the absorption of toxins from the bowels into the blood. Burggraave, the founder of dosimetry, took a small dose of saline laxative every morning of his life, and he lived to the age of one hundred years. This "pointer" will direct your attention to the value of effervescent magnesium sulphate in senile conditions. At the same time, neither the dosimetric trinity nor the triple arsenites with nuclein should be forgotten.

Sciatica.—This intensely painful affection, which gives the physician as many worrisome hours as anything he meets, is handled by the natural forces with most satisfactory results. Galvanism or the static induced currents always give more or less relief and often result in a prompt cure. The therapeutic light, used from hip to heel over the course of the nerve, will be found effective, sometimes curing in one application. The hot-air cylinder reaches with great promptness those cases to which it seems specially adapted. The mechanical vibrator, used over the entire course of the nerve, has promptly cured in numerous instances. Remember that these cases require the electrotonic action of the building-up currents, therefore general galvanism and static insulation should never be neglected. Put your patient on the arsenite of iron and arsenite of quinine or the triple arsenites with nuclein, and stimulate secretion and excretion in every manner. Build him up with everything that makes for good red blood. If this plan is followed, the electrotherapist need not fear to meet this usually most stubborn and intractable of diseases.

Itching Eczema and Other Skin Diseases.—Eczema is the most common as well as the most troublesome of all skin diseases. The moist form is disgusting, the itching form intolerable. Every physician can bear testimony to the inadequate and unsatisfactory character of ordinary treatment. Here it is that electricity, especially the therapeutic light, gets in its perfect work. Armed with this weapon, eczema will no longer be your *bête noir*. Nor need you fear to accept the treatment of any skin affections, for the galvanic and static currents, the violet rays and x-rays, will, some one of them at least, be found to give satisfactory results. Your patient who said, "Oh, Doctor, I can't stand this itching," will bless the Lord for the "therapeutic light" or the "Crooke's tube, and the doctor who knew how to use them.

Rheumatism.—Muscular rheumatism usually gives way promptly to the static induced current. Chronic articular rheumatism, which yields with such exasperating slowness to the influence of drugs alone, can be much more

satisfactorily treated by employing at the same time either the electric-light cabinet, mechanotherapy, the violet rays, or lithia or soda salts by phoresis to the joints. In all these cases do not depend alone upon the forces of nature for cure, but use such antirheumatic remedies as have proven their value. In no class of cases will the rule, "clean out, clean up and keep clean," be found of greater necessity. Don't lose sight of the specific virtues of colchicum in rheumatism. A hot saturated solution of magnesium sulphate to the affected joints will do good. Put the patient upon calcalith in connection with the use of the forces suggested, and see how promptly all symptoms will disappear. Don't make the mistake of thinking rheumatism due to humidity. Experience has taught me that there is more rheumatism to the square acre on the arid plains of western Texas than in all the rest of the state.

Leg Ulcers.—You know the trouble you have in curing them. Let me give you a treatment that is thoroughly dependable and yet "so-easy." Cover the ulcer with sheet lint wet with salt solution, apply the positive pole of the continuous current, attached to a flat copper electrode, moving it over the surface of the lint until the lint is dry and shows a greenish tint. Leave the cotton sticking, and let the patient go about his business. Don't disturb the cotton until it becomes loose, unless matter forms under it. When it drops off the ulcer will be found healed.

Nasal Catarrh

When the posterior nares are affected nothing gives more relief than iodoglycerin

on a swab applied to the region. In the hypertrophic forms of rhinitis I use the positive pole of the continuous current. The positive galvanic current is a true vasomotor constrictor, and when used with a solution of adrenalin chloride, 1:1000, applied on cotton at the end of an insulated copper wire and introduced well back into the nares, using from 3 to 5 milliamperes of current for five minutes three times a week, it will promptly relieve this class of cases. Where there is a raw and ulcerated surface with a tendency to bleed, insufflation of finely powdered acetanilid will give good results. Benefit will be derived from the more or less constant use of mild oily applications slightly mentholized, employing for this purpose an atomizer or an ordinary medicine dropper. If there is constant hawking and spitting, use atropine, gr. 1-500, with a dosimetric dose of aconitine and of arsenite of strychnine every hour or two until the annoyance ceases. Don't forget the value of alteratives in these cases, and give calcerin in 1-grain doses four times a day straight along.

Diseases of Women

I have, up to this point, detailed the results derived from the employment of nature's forces in the treatment of some of the diseases most troublesome and difficult to handle with drugs alone. The limits of this paper will not permit me to take up the treatment of diseases peculiar to females. Suffice it to say, it is in these latter that nature's forces have won their most enduring laurels, and if permitted, I shall consider this highly important subject at length at some future time.

"I BELIEVE in gittin' as much good out of life as you kin—not that I ever set out to look for happiness; seems like the folks that does never finds it. I jes' does the best I kin where the good Lord put me at, an' it looks like I got a happy feelin' in me most of the time."—Mrs. Wiggs.

Artificial Abortion, Criminal and Therapeutic

Its Relation to Ethics and Sociology

By CHRISTIAN JOHNSON, M. D., Willmar, Minnesota

EDITORIAL NOTE.—This article is a further development of Dr. Johnson's views, as presented in the January number of "Clinical Medicine", page 81, and a reply to the editorial comment thereon. It should be read in connection with the article by Dr. Flynn which follows. A brief discussion of the subject will be found in the editorial department.

IN considering this subject, I shall be absolutely candid. We have handled this abortion-question in a routine, superficial way. I know of no writer in this country who has attempted to discuss it from a modern, scientific standpoint. We have been contented with parading the old threadbare stock phrases about the evil of criminal abortion without as much as even making an attempt to study seriously the factors involved. If the following contribution shall help to awake the profession of this country to a study of this problem as we have of others confronting us, my object is attained.

Artificial abortion, criminal and therapeutic or prophylactic, is a large subject of vast ramifications. It is part of the sexual question, is at the bottom of the white-slave trade, is vitally related to race suicide and race degeneracy, and it involves the problem of the mentally defective. By our man-made laws it is a crime, yet to thousands of good women throughout the land, the victims of men's passions, it is the only alternative to suicide.

The Enormous Number of Abortions

The most monumental fact that strikes the student of the abortion-question is the universal violation of the laws against criminal abortion everywhere, and with impunity. There are said to be 100,000 artificial abortions annually in New York City, and from 6000 to 10,000 in Chicago (*Journal of the American Medical Association*, Vol. 51, p. 958), and probably the same proportion to population elsewhere. Criminal abortions, be it understood—and yet the prosecutions

are confined to a few isolated cases of midwives or quacks, and that only in notorious cases where the victim dies under aggravated circumstances.

Now, why is this so? Evidently because public sentiment is opposed to the enforcement of the laws against criminal abortion. Dr. R. W. Holmes of Chicago was, some time ago, chairman of a committee to investigate and to attempt to enforce the law against abortionists. Here is what he says: "I have come to the conclusion that the public does not want, the profession does not want, the women in particular do not want any aggressive campaign against the crime of abortion." (*Loc. cit.*, Vol. 51, p. 960.)

Now, what is true as to the public sentiment on this question in Chicago is no doubt also true elsewhere. Neither the public, the profession nor the women want abortionists prosecuted. But if some unfortunate victim happens to die from sepsis following abortion, then the very party who solicited the midwife or doctor to do the work—and generally with the help of some rival midwife or doctor—is determined to bring the criminal to justice.

Criminal Abortion Compared With Other Crimes

It is evident that in the estimation of the public the crime of abortion is a very different kind of crime from murder, robbery or stealing. If either of the latter crimes were committed once where so-called criminal abortion is committed ten times, the whole community would rise up in arms and lynch the perpetrators.

Now, it is well, in this connection, to remember that what is declared by statute law to be a crime may not be ethically wrong—in fact may be a moral duty, and so *vice versa*. This was the case with the fugitive-slave law. This law compelled every loyal citizen under pains and penalties to return fugitive slaves to their masters, while the duty of ethics and morality bade the individual conscience to send the slave to Canada. Hence the fugitive-slave law could not be enforced except in isolated cases. May it not be that our abortion laws are also defective in some such manner and therefore incapable of enforcement?

Artificial abortion is the premeditated destruction of the fertilized egg *in utero*.

Now, to a normal, sane woman, under reasonable conditions for the development and natural growth of her fetus, there comes no thought of doing away with it. On the contrary, the happiness of her whole being is wrapped up in her endeavor to cherish and preserve it. Her maternity-instinct—the holiest sentiment on earth—is centered on her growing babe. Every mother virtually risks her very life for her baby, and does it gladly; yes, very often she gives it up that her unborn child may live.

When Pregnancy Is a Mistake

But, unfortunately, under modern conditions of life there is many a woman who finds herself pregnant who should not have been so. That is, she is not in a position to do justice to herself or her child. No matter whose fault it is, her pregnancy is a mistake. The more she realizes this the more she comes to dread it, to hate herself and her embryo, and hence to want to get rid of it. I am not now inquiring how far this feeling on the part of this woman in the condition mentioned is justified or not. I simply state the fact that these cases exist among the married and the unmarried.

Now, what is the relation of the State to this woman whose pregnancy is a mistake so far as the mother and the child are concerned? For the State, or the public, has an interest in her and her child—the interest of self-preservation. Should the State com-

pel her to bear this embryo to maturity and assume the burdens of a mother to a child she does not want, because, indeed, some man in a moment of her weakness took advantage of her passivity of character—and impregnated her?

I am not now discussing the ethical right of the woman, I shall come to that later. I am simply inquiring whether it is policy for the State to compel any woman to bear a child against her positive inclination? Does the State want the unwelcome child? Will a child born under such circumstances make a good citizen, or will it be one of those who are a burden to society?

The Change in Social Standards

In trying to answer these questions we are forcibly reminded that our standard of life has changed wonderfully during the last one hundred years.

A hundred years ago, in Europe, society was divided into the classes and the masses. The masses, the soldiers and the wage-workers were needed in quantity, irrespective of quality, and hence stringent laws were passed to preserve everything human that would make a soldier or a peasant. But under modern advanced moral views, and especially in this country, the ordinary masses of the population are not simply common food for the cannon nor working chattel, but human beings entitled to a chance in life for individual mental and material progress, and in any event, in case of sickness or disability, to be cared for by the public in a humane manner.

Hence, the population-problem before the civilized nations today is not simply quantity but, rather, quality. The danger to civilization today is not race suicide but race degeneration. Notwithstanding our enormous outlay on educational agencies, secular and religious, the percentage of our defectives and criminals is steadily increasing at a fearful rate.

The Defectives a Burden Upon Society

Dr. H. C. Sharp of Indianapolis (*Journal of the American Medical Association*, Vol. 53, p. 1898), gives statistics for the enormous in-

crease of defectives in the state of Indiana. I have not the statistics at hand for Minnesota, but it is the same story. Notwithstanding that we are continually building new additions to our schools for the feeble-minded, to insane asylums and penal institutions, they are all overcrowded, filled to repletion with defective humanity—people whose birth was a monumental mistake and in many cases a moral crime against the public, not to speak about the lot of these miserable semblances of humanity themselves.

Not long ago Federal Judge C. Amidon of North Dakota (and, by the way, one of the prominent legal minds in the country), in a speech at Fergus, North Dakota, advocated the painless execution of the "professional criminal" and the "hopelessly insane." Among other things he said, as reported in *The St. Paul Dispatch*:

"The people are taxed to care for the criminal, and if the money could be available for the education of good young men it would not be money thrown away, as it appears to be now. The percentage of the professional criminals who are reformed is so small as not to be worth mentioning.' He wouldn't hurt either these professional criminals or hopelessly insane, but would put them to death in a humane manner and so relieve them of their power to work evil in the one case and put them out of their misery in the other. He thought that a man walking down the path of life quietly and in good order and molesting no one should be protected from the desperate criminal in every way."

Judge Amidon further pointed out that the expense of keeping our defectives is truly appalling, and that this will, before long, compel the normal moiety of society to take drastic measures to protect itself from this ever-increasing flood of defective humanity.

What, then, is the cause of this human degeneracy? The answer is simple. Allowing human defectives to propagate their kind without restraint, and letting chance, accident, passion, folly and debauch determine when another human being shall be begot-

ten, rather than judgment, common sense and ethical consideration; and then preserving every human conception whether it has a chance for normal, healthy development or not.

Preventive medicine, however, I conceive, instead of putting adult defectives out of existence by chloroform or morphine, would prevent the fertilization, and in cases in which that cannot be done, the development of an ovum that inevitably must result in a human defective.

As to where the line is to be drawn between the normal and the abnormal of the human embryo, science is not yet ready to speak. But facts are accumulating on the subject, and we shall soon be able to give advice of great value to humanity.

Transmission of Defects to Offspring

For instance, we know that defectives transmit their objectionable qualities to their offspring. Thus we know that alcoholic intoxication in the father while begetting his child will doom the latter to idiocy, insanity or related nervous defects. Also, that mental and physical strain in the mother while carrying her babe will make it an invalid for life; the latter fact explaining the well-known phenomena that practically all illegitimate children are defectives; the grief and shame of the seduced and deserted girl making it next to impossible for her to bear a normal, healthy child.

So, with these facts staring us in the face—the ever-increasing percentage of defectives as the result of the violation of the laws of heredity and environment—is it not evident that something is wrong somewhere? And may not that wrong be in our abortion-laws? May it not be possible that if the woman pregnant under unpropitious circumstances had the right to terminate that pregnancy in its early stages (as she had under the common law up to a later period), is it not probable that much of this defective humanity would never be born?—a blessing to all concerned. In other words, would not the maternity-instinct of every woman fit to be a mother be ample guarantee that every child that ought to be born into the

world? Surely, with these conditions in mind, it is more than doubtful whether there is any justification at all for our abortion-laws, viewed from the interest of the public.

What Are the Woman's Rights?

We now turn to the woman. Considered, from her standpoint, as a citizen, as a person, as a mother, what are the woman's rights as to submitting to an artificial abortion?

Under the common law of England down toward the end of the eighteenth century abortion before quickening was no crime. This law-custom was based on the old Germanic idea of the right of a woman to her person and her honor alongside of the man. But with the Christian religion we Germanic people also got the Oriental philosophy about women. The woman ate of that apple, and led poor Adam astray. She was a chattel for bargain and sale. She was unclean—it was “not good for a man to touch a woman” (Paul), and, anyhow, was good only to gratify his ungovernable passions, and later, incidentally, to raise soldiers for princes and kings.

These misogynistic views, though never accepted by the Germanic races, have nevertheless influenced our literature and laws on the subject of woman's rights, and ascetic sexual dogmatists have spent valuable time and wasted much ink elucidating the rights of the State and of the rights of the fetus as always superior to those of the human female with child. Even in this enlightened age there are writers who maintain that an operation for ectopic pregnancy is not permissible; that notwithstanding that the fetus cannot survive in any event, it must not be sacrificed in order to save the mother. In other words, the mother must be offered upon the grave of the fetus just as some heathen tribes sacrifice the wives on the graves of their dead husbands.

However, we are beginning to see clearer that a woman, even if she is pregnant, is a person and has rights to life, liberty and happiness, exactly the same as a man, and that, while her chief function in human society is maternity, she has individual and

personal rights paramount to her duties to the race.

When a Woman May Demand the Destruction of the Fetus

We therefore recognize that a woman has a right to demand the destruction of her fetus:

1. When her life is in danger or her health seriously threatened by the pregnant state. This right is now recognized in the laws of all nations of Germanic origin. Dr. Charles B. Reed of Chicago a few years ago, before the Chicago Medical Society, stated this question very aptly as follows: “Where certain diseases and complications appear to exist during the course of gestation and threaten the integrity of the case, a broad human sentiment now permits, nay, even demands the destruction of the fetus. When the situation occurs before the viability of the child, it is recognized as prophylactic or therapeutic abortion.” (*Medical News*, Jan. 28, 1905.) Dr. Reed enumerates certain diseases and disabilities in the pregnant woman that justifies the operation, such as tuberculosis, cardiac, renal and other organic diseases, and insanity. Dr. Jewett of Brooklyn goes over practically the same ground. (*Journal of the American Medical Association*, Vol. 50, p. 1652.)

Therapeutic or prophylactic abortion for the wife among the poor, the mother of more children than she can decently take care of, is a subject of vast sociologic import; it is now very often performed and ranks as one of the distinctly humane medical advances of recent years. This wife, under the circumstances I have indicated, is not seldom married to a man whose passions know no restraint and who will not permit any preventive measures to interfere with his pleasures; thus the poor woman is for years either pregnant or nursing, and sometimes both; until at last she sinks into the grave from sheer exhaustion, leaving half a dozen motherless tots to a cold and cruel world.

The real remedy for this inhumanity to woman would be vasectomy of the man, for which thanks are due to Dr. Sharp of Indianapolis. But until we can get the

man to submit to this we must help the woman, both for her own sake and for the sake of her little ones, by promptly emptying her womb.

Pregnancies Following Rape

2. When the woman has been impregnated by rape or gross imposition. Are rape-pregnancies rare? By no means. Only the woman does not make it known unless circumstances compel her to do so. Besides, the popular conception of rape is wide of the mark. People unfamiliar with this question think that rape is intercourse by sheer physical force with a strong healthy woman who succumbs to the ravisher after vigorous resistance. However, Dr. Emerson ("Legal Medicine and Toxicology," p. 114) defines the meaning of the phrase "by force", in the statutes relating to rape, as follows:

"The term 'by force,' which is used in the above legal definition (of rape), implies force that is necessary to overcome the will of the victim. This force may be physical or moral. The law makes no distinction. There are many instances where the crime has been committed in which the woman was incapable of showing that her consent was withheld. The ravisher may threaten by word or action, so that the victim makes no resistance, and the crime is unlawful. The victim may be under the influence of narcotics or in some physical condition, as in hysteria and hypnotism, and unable to express her refusal; and in these cases it must be held that the crime was committed 'by force.' The resistance that the victim is required to show is the utmost resistance that she is capable of, this depending, of course, to a certain extent, not only upon her physical vigor but also upon her mental condition. Sometimes a strong muscular woman may be so frightened that she cannot exert her usual resistance."

This definition of rape practically covers the process of seduction for the white-slave trade by the "cadets," and the more usual old-time seduction in wine-rooms of young girls in all our large cities. As to what I mean by impregnation by gross imposition

I will show by quoting Dr. Denslow Lewis of Chicago: "Those of you who like myself have had charge for years of maternity hospitals, know that many young girls seen there have submitted to the sexual act without the slightest knowledge of the probable result." *Journal of the American Medical Association*, Vol. 51, p. 960.)

From every consideration of fair play and justice to the miserable victim of the brutal sexual passion of man every woman of the class above mentioned should be conceded the right of an artificial abortion. Dr. Ford ("Sexual Question," p. 409) says: "In cases of rape and forced pregnancy in general the right to artificial abortion should be conceded to the woman."

It is really remarkable that in this enlightened age that has liberated the black slave there is still no legal justification for relieving a woman of a fetus that has been forced on her by a brutal ravisher. But men who make the laws will raise a mob to lynch the ravisher, yet not lift a finger to redress the injury done the victim!

Betrayal Under Promise of Marriage

3. In many cases of betrayal under promise of marriage resulting in pregnancy and desertion. I wish to remind my reader that I am calling things usually evaded in a discussion of this kind by proper English names. The class of cases now under consideration is represented by "Gretchen," immortalized by Goethe in "Faust."

There is no more pathetic figure in poetry, drama or human history than Gretchen. This is because in Gretchen we have all the ideal attractive and lovable qualities of young womanhood, youth, health, beauty, innocence and sentiment that go to make the ideal wife and mother; and all of this possibility of human happiness wrapped up in this simple blooming maiden is destroyed, nay, worse, converted into a living hell here on earth by the ungovernable male passion of that sensual man Faust. Had an honest youth met this innocent maid just at that time in her life when her whole womanly nature was waking up to the sensations of yearning for a man's love, she

would have become the ideal wife and mother. As fates would have it, Faust met her and blasted her life.

The psychology of the maiden in her first love is an interesting study. Physicians ought to understand something about it. Asexual individuals or the licentious need not try to grasp the idea.

"In the young girl love is a mixture of exalted adoration for masculine courage and grandeur and an ardent desire for affection and maternity. She wishes to be outwardly dominated by a man, but to dominate him by her heart. This sentimentalism of the young girl, joined with the passive role of her sex, produces in her a state of exaltation which often borders on ecstasy and then overcomes all the resistance of will and reason. The woman surrenders herself to the man of whom she is enamored or who has conquered or hypnotized her. She is vanquished by his embraces and follows him submissively, and in such a state of mind she is capable of any folly." (Ford, "Sexual Question," p. 130.) And so Gretchen:

*"Seh' ich dich, bester mann, nur an,
Weiss nicht, was mich nach deinem willen treibt."*

Gretchen the Victim of Suggestion

Gretchen is the victim of suggestions of the powerful mind of Faust. Faust, indeed, truly loves Gretchen—after the manner of man's love—but he lets amorous intoxication get the best of them; and then he forgets her for other matters until it is too late. He wanted sexual gratification and forgot all about the inevitable fate of Gretchen, and left her to suffer alone just as the tribe of Fausts are doing throughout the civilized world to this very day. Soon Gretchen realizes that the man whom she loved and trusted has betrayed her. She now sits at her spinning wheel and sings:

*"Meine ruh ist hin,
Mein herz ist schwer;
Ich finde sie nimmer
Und nimmer mehr."*

At the well, after talking with Lieschen, she regrets that she has been so severe a judge before on the fallen *maegdlein*—she is now fallen herself, yet:

*"Doch—alles was dazu mich trieb,
Gott, war so gu! ach, war so lieb!"*

And so poor Gretchen goes on, the victim of her womanly nature and man's perfidy, in her downward course of misery and ruin, dragging with her her mother, her brother and her babe, until her last stand, hope not yet dead in her young bosom:

*"Erbarne dich und lass' mich leben!
Bin ich doch noch so jung, so jung,
Und soll doch sterben!
Schoen war ich auch, und das war mein
verderben."*

The Army of Gretchens

Day before yesterday the Minneapolis paper told of the fishing out of the river of a body of a young, beautiful woman—it was Gretchen. Yesterday the papers recorded the death, in a hospital, of sepsis after abortion of a beautiful café-waitress, the only support of an invalid mother. Gretchen again! Today the same tale, only with a little variation. All can sing:

*"Schoen war ich auch, und das war mein
verderben."*

And so on and on, in unending processions this vast and innumerable army of Gretchens is marching by—all suffering the tortures of hell, in anguish of mind, in despair of the future, the scorn of their comrades, despised and ostracized of the public—to fatal sepsis, suicide, insanity, or a life of shame! They are the veritable travelers from Jerusalem to Jéricho who have fallen among thieves, thieves who have stripped these loving, confiding girls, not of their money or property, but of what is more than property, more than life itself—their honor and future hope and prospect in life, and left them wrecks upon the shores of time.

And we who pride ourselves on our Christian civilization, with our church spires reaching toward heaven in every village and hamlet in the land, we priests and Levites and Pharisees, what have we done, what are we doing to relieve these bleeding victims of man's lust and perfidy? We passed by on the other side of the road, shrugging our shoulders at the unclean thing, the while calling the man that is the cause of all this misery "smart." And no good Samaritan has come along; except, perchance, it be some big-hearted physician

who would help a fellow being in trouble even if he had to violate the law and does so.

The Remedies Proposed

Here let me say, I have studied all the remedies that have been prescribed for Gretchen by the church, the law, and the medical profession, from the education of the youth in sexual hygiene to the shelter of maternity. All of these things, the agencies designed to prevent lapses and to aid the fallen are good as far as they go; but they are makeshifts only in the great majority of cases.

If society wants to save Gretchen, she must be given a chance in life; and the only measure worth mentioning is prompt abortion in cases where this measure is honestly deserved.

Dr. Ford ("Sexual Question," p. 411) holds that artificial abortion and even infanticide is justifiable in many of these cases, and that a counsel of physicians should be created with the power to decide when the measure should be applied. I am satisfied that there are many cases of this kind in which abortion is morally justifiable because it is the only measure that can save the woman for future usefulness and a bearable life. In these cases it is in fact therapeutic abortion in the truest sense of the word.

We know, further, that abortion is performed in many of these cases, and that by prominent members of the profession. Dr. R. W. Holmes of Chicago says: "I have positive evidence that prominent men in Chicago (and Chicago is not different from other cities) will commit abortion." (*Journal of the American Medical Association*, Vol. 51, p. 960.) Why, then, be hypocritical about this matter? Why all this hue and cry about abortion when prominent men are performing it? Isn't it evident that we need a re-study of this whole subject?

The Right of the Fetus

There is one more phase to my subject: The right and status of the fetus.

Formerly, before the general facts of biology and human embryology were known,

human conception was considered a miracle of divine interposition. Ordinary people who do not know of the advances of modern science believe so yet. Hence, regarding conception as a direct act of Providence, it was an easy inference that parents were not responsible for the character of their children, nor need be much concerned with making any provisions for them.

But modern science, that moved the earth off its foundation and set it twirling around the sun, has also upset the old theory of human generation. We know now that mankind is propagated according to the general laws of biology. The fate of the individual human unit is not in the stars but in his chromosomes. In fact, conception is not a new creation at all, but only a new combination of two groups of the chromosome stock of the species to form another individual. These chromosome groups carry with them their racial, specific and individual characteristics.

Further, modern investigation has shown that these chromosome-factors of the human unit do not blend but run parallel or alternate in their influence. And here we have the explanation of the different tendencies and inclinations in races and individuals. The Apostle Paul thought it was the Holy Spirit and Satan who were contending in his body for the mastery, but actually it was the chromosomes derived from moral and immoral ancestors.

But the individual human being is also subject to the influence of environment, especially so while in its early immature stage. Even the generative cells while on their journey to their conjunction may be subjected to noxious influences that may blast the career of the embryo. We know, for instance, that the father may be of good stock, but a temporary alcoholic intoxication at the time of impregnating the mother may so affect the formative energy of the spermatozoon as to result in a defective nervous cell in the child, resulting in idiocy, insanity, or other defects of the nervous system. We know further that both parents may be of good heredity and the embryo well formed, yet mental and bodily suffering

in the mother during gestation may blast the life-long well-being of the child. And common observation teaches us that proper care and training from infancy to maturity is necessary to get the best out of the human individual.

It is these biologic laws of heredity and environment that form the basis for the modern views of the status and the right of the human fetus.

The Fetus Has a Right to Normal Life

The human fetus has not only a right to life, it has a right to normal life. It has the right that it shall not be brought into the world doomed to spend its existence in misery and suffering. It has the right to be born a healthy, normal human being, not a monstrosity.

The duty of the State to protect the fetus does not begin at conception, it begins long before that. The State may, and should, sterilize male and female defectives (Dr. Sharp, *Journal of the American Medical Association*, Vol. 53, p. 1899), and may destroy the abnormal fetus, or being, at any stage of its career, in the interest of society, of the mother or of the fetus itself. (Judge Amidon, *loc. cit.*)

To show how the public is waking up to the importance of the sociological aspect of this question I will quote from *The St. Paul Dispatch* (Dec. 2, 1909) part of its comment on the views of Judge Amidon.

"Have you ever been through the state school of Faribault, or the state hospital for the insane at Rochester, or the state's prison at Stillwater? If you have, then I think you will admit that something is wrong somewhere, that the state, whose proud name prefixes these titles, is in error somewhere. The first-named institution and the one which offers to give deeper argument for the right of man to take human life that is hopelessly away from the human form.

"As fast as the state of Minnesota builds additions to the many buildings which form the home for defectives the house is filled, and there are more defectives in every part of the state waiting refuge. Not all of these sad creatures are in such condition that they

are hopeless, perhaps. And there, as in all these classes, is the difficulty Judge Amidon and the other advocates will have the determining of just the line which separates hope from unhope. But when there are cases of creatures, barely human in form—some who are in adult years and do not lift a morsel to their mouth but must be fed day to day, and some so far from human appearance that no visitor is ever allowed to see them—it would seem not so difficult to begin the final act, even though no one ever can deny that it is difficult to know where to end.

"The difficulty here as in all abnormal development of life is that the State begins too late. One young mother went down to Faribault, a short time ago, to see her oldest child, taking with her another child who was to remain. And she remarked without a shadow of shame or understanding that the baby would soon come. This mother was herself an incurable but not dangerous. Yet the State permitted her to go on producing defective children for whom she could not care, for whom the State, through its carelessness, must pay. It is now taking care of three children because it has not taken care of one mother."

Comment on the foregoing statement of the facts as they may be seen in all our institutions for the defectives are unnecessary. If we cannot educate our youth up to a realization of the responsibility of parentage the State must take drastic measures to prevent the birth of all this defective humanity.

Sterilization by vasectomy of defectives, and artificial abortion at an early stage of the defective embryo are the two main medical measures—the only measures that promise a certain and radical relief. The medical profession should be given full power to employ these measures for the benefit of the individual and society.

Summary

1. The abortion-question should be studied in the light of modern science.
2. The abortion-laws are not in accordance with public sentiment.

3. It is probable that our abortion-laws favor the propagation of defectives.
4. The rights of the woman are superior to the rights of the fetus.
5. Rape-pregnancies should have the legal right of abortion.
6. The postmortem salvation of Gretchen does not satisfy the moral sense of the public.
7. The right of the fetus is not only to life, but to normal healthy life.
8. The duty of the State to the future generation begins before it is begotten.
9. The medical profession should be empowered by law to apply all available remedial measures for the improvement of the human race.

The Abortion Problem: Another View

By J. AUGUSTIN FLYNN, M. D. Washington, D. C.

EDITORIAL NOTE.—Dr. Flynn dissents both from the position held by Dr. Johnson (as presented in our January issue and the article which immediately precedes this one) and that held by the editor. He defends the extreme position, that it is never justifiable to sacrifice the unborn child—not even to save the life of the child's mother. We are glad to present his view of the problem, side by side with the argument of Dr. Johnson, that our readers may have an opportunity to see its different aspects and formulate their own opinions.

I WAS somewhat disappointed after reading the editorial criticism of Dr. Johnson's letter in the January number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE; for, after finishing the article and comparing both attitudes toward the question discussed, I found that, apart from an apparent dissent in minor points, you agreed substantially with a position which I think is far from being a strong one.

In this question of "child killing" which has been treated so cold-bloodedly of late, it seems to me that a statement of principle upon which the physician acts would be more to the point than fifty citations of instances wherein he thinks it right to take the life of the unborn child. In your reply to Dr. Johnson you admit that when it is necessary to save the mother's life, to bring the course of pregnancy to an end by sacrificing the life of the unborn babe has moral justification. You agree also in regard to the young woman raped by a negro, that abortion is justifiable, even when condemned by state law as criminal. Certainly this is a dangerous principle for any portion of our medical fraternity to accept. Are we not supposed to give the great body of legislators credit for having as much fore-

sight and intelligence, when it comes to a matter of public weal, as we claim for ourselves?

Would it not, I ask, be far better for us, instead of violating the law, to try to have such laws amended so as to legalize our actions? I speak here especially of the former case mentioned in your article. But to pass over this phase of the question, I should like to know upon what moral principle you justify the killing of an unborn child. I do not ask for any social principle, arbitrarily set, but for a *moral* principle, since you speak in your article of moral justification.

Let Us Act Upon Principle

We must act on principle, not sentiment, and it is a big mistake to think we are playing the role of the Good Samaritan when we act out of pure sentiment. The Good Samaritan, who certainly is a worthy model for our profession to imitate, was not actuated by sentiment when he bound up the wounds of the unfortunate traveler and took care of him. He was actuated by the moral precept, "Love thy neighbor," and I am sure if he were called into consultation with Dr. Johnson he would still be guided not

by sentiment but by the moral precept of the same universal Lawgiver, "Thou shalt not kill." I cannot imagine the Good Samaritan taking part in a sacrifice in which he is the self-ordained priest and the immolated victim an innocent and helpless child. If there must be Moloch worship, then leave it to the pagans; for those who are basking in the light of God's revealed truth a return to this primitive practice of human sacrifice is too utterly horrible to think of.

The Author's Rules in These Cases

As regards my own action in cases of this kind, I have long ago found a rule of conduct which to my mind has "moral justification." In casting about for some principles upon which I could act in these cases the following appealed to me as final: First, "Thou shalt not kill." Second, "The end never justifies the means," viz., one cannot do evil that good may come from it. From these I concluded that intrauterine life must be respected as much as the extrauterine, under all conditions.

Now, when you "sacrifice" the life of the unborn babe, you kill outright. This you must admit, as you do in your article. Who, I am inclined to ask, has constituted you or me or any other member of the medical fraternity the arbiter of life? I am still of the opinion, taught me many years ago, that the absolute and exclusive right to life belongs to the author of life, God. Certainly the physician has no right over human life.

But has the mother?

I do not see how we can admit that the woman who has freely consented to bring a child into this world can, when she deems fit, turn upon the fruit of her womb and coolly order its sacrifice, even when the child may endanger her life in coming into this world. Why has not the child the same right to life as the mother? Suppose the inability of the mother to deliver her child is the result of her own folly; suppose she did not take proper care of herself or sacrificed her health and the power of bearing children to keep up the social pace? Is the

innocent babe alone to suffer for this? If you may kill the unborn babe when it endangers the mother's life, then why not the born child, or man or woman, when it endangers the life of many, as by contagious disease, for instance.

A Supposititious Case

Or let us suppose the following case: Right after the birth of a child an angry husband says to the child's mother, "Kill this fruit of your unfaithfulness or I will kill you both." Should the woman now argue, "Better one dead than two," and kill the child? Would you say, she was morally justified?

The mere fact that inexorable nature in the one case is the aggressor, and an angry husband in the other, does not at all alter the case. It is just as criminal to kill in the one instance as in the other. I do not think you will go so far as to say that the killing of the child, which must in either case die, is a lawful deed the day before birth to save the mother, and a horrible crime the day after birth, when done for the same cause. To my mind the taking of the child's life in either case is equal to the direct taking of an innocent human life, and is consequently a transgression of the divine command, "Thou shalt not kill."

Of course I am now addressing myself to those who profess faith in a universal Lawgiver and believe that His precepts are just as valid today as they were when first uttered. For those who have no such belief but base their actions upon some arbitrarily fixed social standing I have no argument, for I know of no purely social precept that is not relative and determined by man's caprice.

As regards the second principle, I think it must be admitted by everyone who would escape universal anarchy both in the social and the moral order. Abortion is an operation whereby the child is deprived of life to which it has a sacred and inviolable right. As such it is an evil and never justifiable as a means, no matter how great or good the end may be.

I have endeavored in these few lines to give a statement of the principles by which I am guided in my life as a physician. We must have some moral ground for our actions. I do not see that you have given us any moral principles by which the physician may be guided. You say it is morally justifiable to sacrifice the life of the unborn babe when the mother's life is in danger, but you fail to state the principle of morals by which such an act is justifiable. Once you admit the principle, and I do not see how you can escape admitting that the right to life is sacred, that no one has the right to sacrifice an innocent human life. I do not see how you can justify abortion *in any case*. Deny these principles that I have set forth, allow abortion in some cases, and I fail to see where you can draw the line with anything like logical consistency.

[In the editorial department we have taken up some of the questions raised by Dr. Johnson and Dr. Flynn, so we shall not undertake to discuss them at length here. We do wish, however, to say a few words in comment:

Dr. Flynn writes: "You agree also in regard to the young woman raped by a negro that abortion is justifiable even when condemned by state law as criminal." We are not conscious that we admitted anything of the kind, except in the way of argument. Our position was this: Provided we admit that in case of rape by a negro the production of abortion is justifiable, how much of an argument, *even then*, has Dr. Johnson? Practically none, since the number of cases of this kind is so small as to be negligible. This being the case, Dr. Johnson's argument falls absolutely to the ground.

It is probable, however, that, as Dr. Johnson says, no jury could be found to convict a physician producing an abortion under these circumstances. The condition is one so unusual that I presume it was not even contemplated by most of our lawmakers in making provisions for legally cutting short the course of pregnancy. Possibly the laws in some states do provide for such a contingency. I do not know.

Personally I believe that such exception should be made, just as I believe that no physician should disregard the law, unless there is very plainly a higher moral obligation. In case of doubt he is never justified in acting alone. Let him call in other medical men, and be guided as far as possible by the deliberate decision of this composite mind.

But the bulk of Dr. Flynn's paper is in defense of the proposition that the physician should *never*, under any circumstances, not even to save the woman's life, produce an abortion. His argument is based upon the moral principle, "Thou shalt not kill."

This principle is to be obeyed to the very letter, upon the hypothesis that all life comes from God, and so necessarily is sacred. He has no right to select the mother for life, if by so doing he must condemn the mother to death. Both would better die than to destroy one to save the other. There are cases where both would inevitably die without interference; but even here, if we accept the inexorable logic of Doctor Flynn's position, he must keep hands off. Let both die! But is the Doctor's "moral principle" one from which there is no deviation? It seems not so to us. We all recognize, or should, that our highest sense of duty to God is shown in service to man. The social welfare is paramount. And when the social welfare justifies, society as a whole has never hesitated, and does not today, to destroy the life of an individual. That is the justification for capital punishment. Nor does the Christian Church condemn war, or forced conscription, in which lives are inevitably surrendered for the supposed good of the State. The precept, "Thou shalt not kill," is therefore one which permits of exceptions, even in the minds of those who adhere religiously to the precepts of Holy Writ.

Is it not equally important to preserve the purity of our race at the very fountain-head? Is it wrong to destroy the seed of to rapist, for instance, to prevent the production of more vice, more criminals, yet right that we should hang the poor passion-dominated degenerate himself? The Doc-

tor's argument brands the preservative measure as a sin and justifies the legal murder. This does not seem to me good logic.

Dr. Flynn also forgets that the woman who may require the termination of pregnancy to save her life has not as a rule "freely consented to bring a child into the world," as he states. Not once in ten thousand times would a woman consent to become pregnant if she understood that this meant her own death. The condition is one that in many cases is forced upon her, not only not with her consent, but against her will. In many, very many cases, she is the unwilling slave of the most brutal passions—within the marriage bond, as well as outside of it.

Yet, according to Dr. Flynn's logic, even the raped (legally or illegally) woman, with a contracted pelvis, suffering from tuberculosis, advanced disease of the heart, or any other condition in which the natural course of pregnancy would mean her speedy

death must submit and die—and the doctor must turn his back and bid her cease her pleas for help. Following the same logic, one who obeys to the letter the precept, "Thou shalt not kill," would submit his body to the assaults of the midnight assassin, raising no hand in self-defense. Of course, his premises being accepted, there is absolutely no escape from Dr. Flynn's logical conclusion, but this is exactly what is not admitted by vast numbers of conscientious men. In my opinion there are only two conditions that justify the production of abortion, the first being to save the mother's life, as this is at its maximum value to society, while that of the fetus is only in potentiality; the second condition is the fostering of the highest good of society, which may justify cutting short the propagation of the criminal and defective, though this presents difficulties. The production of abortion to save from illegitimacy seems to me unjustifiable.—Ed.]

Specifics for Conditions

A Modern Conception of "Specific Medication"

By WILLIAM F. WAUGH, M. D., Chicago, Illinois

Dean and Professor of Therapeutics, Bennett Medical College

THE ancient idea of specifics contemplated a remedy for each disease in the nosologic list. After centuries of search our acquisitions along this line are not very numerous. Quinine for malaria, mercury for syphilis, the sulphides for gonorrhea, pilocarpine for sthenic erysipelas and antitoxin for diphtheria comprise the list of those which may be said to be fairly established; and even of these five the entire profession is by no means ready to accept all. Beyond this and still in the experimental line we have the various serums, and these represent the modern development of this theory. While several of these are quite promising, none can as yet be said to have won such a place in the confidence of the profession as the five mentioned.

In the meantime, however, another line of specifics has been developed; that of specifics aimed at the various physiologic functions. Looking upon disease as presenting itself in the form of a derangement of one or more of the vital functions, we search in our materia medica for agencies by which we can stimulate or sedate whichever of these functions we see to require such stimulation or sedation. Such remedies may be called modifiers of physiologic functions.

The more profoundly we study the physiologic operations of the body, the earlier we are able to detect aberrations from their normal operation. We know that such functional aberrations precede the development of structural disease, and we have a well-grounded belief that by promptly in-

tervening during this functional stage, and restoring the ailing functions to healthy, normal operation, we are able in many instances to check the further progress of the disease.

It is evident that to accomplish this purpose we must have in our hands perfectly specialized weapons; those which modify the physiologic functions exactly and quickly; those which can be relied upon to do exactly what we expect of them and not something else.

The Ideal Remedy a Depressant or Stimulant of Function

The ideal remedy is one which depresses or elevates a single physiologic function without affecting others, and the more nearly this idea is approached, the more certainly we can handle such remedies. It is in the direction of this ideal that those of us who are developing the therapeutics of the pure, single active principles are progressing. Naturally, but little has been done along this line, because the workers are so few. Nevertheless, the following summary will show that some progress has been made.

Salicylic acid, a specific gastroduodenal antiferment in rheumatism.

Aconitine to stimulate cardiac inhibition and relax vascular tension.

Aesculin to dissipate hemorrhoidal congestion.

Agaricin to check the sweating from relaxation.

Aloin to stimulate rectal peristalsis.

Anemonin for uterine congestion with checked menstruation.

Antimony arsenate to hasten resolution of pulmonary exudate.

Apocynin to contract arterioles and capillaries.

Apomorphine to quickly stimulate secretion from the respiratory mucosa.

Arbutin to soothe mucous irritation in the genitourinary system, and check the loss of albumin, as well as to encourage the restorative processes in this tract.

Arsenic bromide to check the disposition to acne when other bromides are given.

Arsenic iodide, the most powerful and quickly-acting of the iodine and arsenic preparations.

Arsenic sulphide for constitutional infection with the gonococci.

Aspidospermine to allay dyspnea.

Atropine to relax spasm and stimulate the capillary vasodilators.

Berberine to restore the contractility of relaxed connective tissue.

Bilein to initiate biliary digestion.

Bolding to increase the formation of urea.

Brucine to stimulate like strychnine, and at the same time to allay gastric irritation by its local anesthetic power.

Cactin to regulate functional disorders of the heart.

Caffeine to sustain a weak heart and quickly eliminate the fatigue toxins.

Calx iodata to abort forming respiratory catarrhs.

Calx sulphurata to abort or cure bacterial infections.

Calcium sulphocarbonate to disinfect the alimentary canal in cachexias, tuberculous, hemorrhagic, denutritive, and all cases where lime is deficient.

Camphor monobromide for nervous erethism.

Cantharidin for genitourinary atony.

Capsicin to arouse sensibility in the digestive system.

Caulophyllin to allay the pains preceding true labor-pains.

Cerium oxalate to allay gastric irritability.

Cicutine to allay spinal irritability.

Cocaine to allay local irritation.

Codeine to lessen irritative cough and allay gastrointestinal spasm.

Colchicine to eliminate the toxins of gout and rheumatism.

Condurangin for its local effect in cancer.

Copper arsenite as a duodenal antiseptic.

Cornin as a tonic to erectile tissue.

Cotoin for the diarrhea of tubercular enteritis.

Croton chloral for headache with tenderness of the scalp.

Cypripedin for nervous unrest.

Delphinine for vesical insensibility, with fever.

Digitalin as a heart tonic.

Digitonin to relax vascular tension.

Dioscorein for the minor pains of gallstone colic.

Emetine to stimulate a healthy secretion of the digestive fluids.

Ergotin to stimulate the vasoconstrictors.

Gelesmine to allay irritability of the upper spine, the medulla, and the cerebellum.

Glonoin to relax spasm.

Helonin to prevent spasmodic dysmenorrhea.

Hydrastine to contract arterioles and capillaries.

Hydrastinine to contract the uterine vessels.

Hyoscine to relax spasm and induce sleep.

Hyoscyamine to relax vasomotor spasm.

Iodoform as a local anesthetic giving the constitutional effects of iodine.

Leptandrin to increase the flow of bile without catharsis.

Lobelin to stimulate the respiratory and digestive secretions, and relax spasm.

Lycopin to check hemoptysis.

Macrotoin to allay the nervous irritability in the later stages of chorea and similar affections.

Mercury as an antisyphilitic and to stimulate destructive metamorphosis.

Nuclein to stimulate leukocytosis.

Papayotin to initiate digestion.

Physostigmine to stimulate intestinal peristalsis.

Phytolaccin to dissipate glandular congestion.

Pilocarpine to induce perspiration and salivation and stimulate leukocytosis.

Podophyllotoxin to stimulate peristalsis in the large bowel.

Quassin to increase appetite and restore gastric tonicity.

Rhus tox. to restore tone to the vesical sphincter.

Salicin to sedate excessive sexual irritability.
 Sanguinarine to stimulate the respiratory tissues.
 Senecin to stimulate menstruation.
 Sodium sulphocarbolate as a gastrointestinal antiseptic in cases of acidity or of irritable stomach.
 Solanine to lessen reflex irritability.
 Sparteine a cardiac tonic with little or no effect on vascular tension.
 Stillingin to stimulate lymphatic elimination.
 Strophanthin a cardiac tonic with little effect in increasing vascular tension.
 Strychnine a general tonic to all the functions of the body.
 Veratrine a stimulant of all the eliminative apparatus, and relaxer of vascular tension.
 Viburnin to relax uterine cramps.
 Zinc cyanide to soothe irritable cough.
 Zinc phosphide to improve nutrition of the nerve-roots.
 Zinc sulphocarbolate an intestinal antiseptic.

The above list will show that something of a beginning has been made, although there are very many remedial agents still required to fill the needs displayed by a study of normal and pathologic physiology.

More Specifics Will Be Found

Among the numerous active principles which have been discovered but never as yet utilized in medicine there are undoubtedly many weapons which will prove of inestimable value when they have been studied. As physicians give more study to the patient at the bedside and learn to detect variations from the normal workings of the physiologic functions, the demand for agents of this sort will undoubtedly increase. In time we may hope to have, in our armory of specifics, stimulants and depressants for every vital function whose operation we can recognize in our patients.

Taking these as the basal action of the remedies named, we are ready to apply them intelligently whenever the corresponding disorder in physiologic function is manifested. Very frequently indeed we detect the combination of vasomotor spasm in part of the circulatory area, and vasomotor paresis in another part. Hence, in the treatment of all inflammatory and febrile affections, we find indications for the use of aconitine and digitalin, reinforcing them with strychnine when the asthenic condition is manifest or veratrine when sthenia is most marked. So also in the treatment of numberless affections we find it of advantage to associate

the powerful tonic vital incitor, strychnine arsenate, with the antispasmodic hyoscyamine.

Study the Book of Nature

The study of disorders of functions and matching these with appropriate remedies is a pursuit of absorbing interest. The physician who studies disease from the book of nature will find it infinitely more attractive than any textbook, and he will find many things that no book will teach him. He will not be long in realizing the great truth that the earlier he intervenes in the treatment of any disease, the more effective will be his therapeutics, and that if he can catch any malady in the formative stage, before material lesions have occurred, he will in most instances be able to break up and abort the attack.

But this is incomprehensible and hence unbelievable to the physician whose knowledge of disease is gathered only from printed books, for he requires the orderly development of disease through its various stages to enable him to complete his diagnosis, and until the diagnosis is completed he is unable to intervene intelligently; hence, by the time he has made up his mind as to the name of the disease the opportunity for effective intervention has passed. It certainly seems a matter too evident to be disputed that the more skilful is the physician in studying disease as presented by the patient, the earlier he will be able to make his diagnosis, as he becomes familiar with the aspect of disease in its earlier stages and experience teaches him what he is to expect when any symptom complex makes its appearance.

Not Difficult of Application

I regret to say that in conversation with many physicians I find that to them this matter looks abstruse and too difficult for the average man to apply. One man said to me, "It looks easy to you and certainly is, but I cannot get the hang of it." This is to me incomprehensible, for since the adoption of this method the practice of medicine is so easy that for the first time in

my professional life I am conscious of the burden laid upon me by the old, unnatural method. It is so perfectly simple and easy to study a patient, note the most prominent deviation from physiologic functions, such as the presence of fever, pain, spasm, debility, autotoxemia, etc., and at once to apply the remedy for the conditions presented without waiting until the development of

disease enables me to classify it as I would a museum specimen. I have long since made the discovery that my abilities as a physician are by no means above the average; hence I urge the importance of these matters, not as suitable for a few highly proficient specialists, but as easily within the reach of every physician qualified to practise medicine.

Therapeutic Nihilism*

Some of the Conditions that Favor It, and How to Prevent It

By W. T. CRAWFORD, M. D., Fowler, California

MY personal observation after twenty years in the practice of medicine and as many more in the pharmaceutical line is the only apology I have to offer for this disconnected medley.

The nihilist is not of recent origin or few in number, as you have seen or heard of him all down the progress of medicine and its allied branches. He has been an obstinate, indomitable character who has fought bare-handed almost all scientific research in medicine and in surgery. He is the unsophisticated anomaly that has done more to place internal medicine in disrepute than all other agencies combined.

It is said "that much learning made Paul mad," also "that a little learning is a dangerous thing," which may make some men greater fools than they are naturally.

The most insufferable nihilist is the egotistical bigot whose head swelled in adolescence and has remained *in statu quo* ever since. You frequently meet this man in consultation, and his brilliant knowledge so outstrips yours that you feel like a perforated three-cent piece. You think, but you cannot say, that you have met a conceited and confused mass of atrophied gray matter.

Therapeutic Instruction Is Defective

It is beyond controversy that the lack of therapeutic knowledge is one of the prime

factors in medical nihilism. Also the poverty of therapeutic instruction in our schools, for the last half century, has been the potent cause of all the "pathies," from homeopathy to osteopathy. Glance through any of our recognized standard textbooks on treatment, and also on therapeutics, and see the small advance that has been made in drug-therapy. Take up almost any author and review his different editions during several years and observe the old rehashes and reiterations, and this in the face of notable progress in other branches of the healing art. Take a week under your old-time teacher of therapeutics and you will likely hear the same old cut-and-dried lectures that you heard when you were a student.

Little wonder indeed that we have such a chaotic medley of therapeutics in which we are asked to place reliance in the relief of the sick.

Another cause is our routine practice and the holding to the one-man idea as an authority. Who is an authority? I confess I do not know—doubt if anyone does. The fact is proven that the men who write books are not men of actual bedside experience, and are many times mere compilers. Most of these men are miserable failures in the practice, then why should we take their opinions as final. It is better not to absorb the one-man idea as iron-clad and go through life with it. The man who does is

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very badly handicapped and likely to be very narrow-minded and his professional capacity is limited.

In the three older schools of medicine we have many drugs of proven therapeutic action, but certain prejudicial dogmas keep many men from using them. This is a great mistake, as our calling is to relieve the sick; hence we should eliminate this bigotry within us.

The Surgeon As a Drug-Nihilist

The ready-made surgeon turned loose from our colleges with every passing year is a great factor in the nihilistic field. He has never learned therapeutics and but very little surgery. His principal fort is filling untimely graves. The specialist who jumps into his work immediately after graduation is also thoroughly nihilistic. Both these classes of men are better acquainted with the detail-man and his wares than with dependable therapeutics.

These men with their nihilistic practice have driven many people into the arms of all the "isms" and "pathies" from homeopathy down to mere medicine. These pathies and isms are legion, as you know, and are rapidly increasing in the fertile brains of perverted men and women. Do not understand me as detracting from the men in our profession who have made diagnosis absolute from bacterial demonstration and pathological findings, and made treatment of disease from serums, vaccines and anti-toxins possible. Yet we have men in our ranks who make a pretense at this work that is less credit to them than outright quackery would be, and is also criminal. Such men should be eliminated from our midst.

What has been said of the works on therapeutics applies also to the textbooks on practice. See, for instance, how the old formulas are copied from one edition to the other. Surely there is something vitally wrong with our old methods of treating the sick, they have not kept abreast with our increased knowledge of a better diagnosis. And why? There is but one reason, namely, the teacher has through all the

passing years of his life religiously adhered to the old moth-eaten works of his venerated "authority."

"Do Not Use Aconitine" (!)

I shall give but one illustration. One in authority says, "Do not use aconitine, as it is a violent poison." Now, this sounds funny to me, for I have used it daily for the past fifteen years. Besides, I have prescribed many other drugs that are potent poisons. So, is this a good objection? Fire will burn you if you get too close to it, but it will also warm you if you use it aright.

The regular surgeon has much to his credit as a nihilist, he belittles drug-therapy, and for a very good reason—he possibly never learned it; if he did, his knowledge was very limited, while if he is a busy man he has no time and often not the inclination to keep abreast with the research work in medicine.

In the city and the larger towns is where the nihilist succeeds the best, and especially so in the hospitals. He is not much of a success in the country, as the country doctor must be a man of large resources, or he would soon lose his job. What makes men nihilists is the employment of otherwise valuable drugs in an irrational manner?

Naturally the man who practises in this manner sooner or later comes to the conclusion that there is nothing in medicine. Such a man, especially at the beginning of his career, is always looking for a sure cure for a named disease without the exercise of his gray-matter. You will find him with some hospital or other formulary on his desk or in his pocket, which will fill the deficiency of reserve brains. With the formulary and a guess-name for the condition, he goes merrily along, the patient doing the best he can with the added incumbrance, and dies or gets well according to the amount of his vital force. This man is a menace to the nation and a disgrace to the medical profession. The full-fledged nihilist looks with pity on the country doctor. But, gentlemen, if I were sick and wanted a doctor, I should prefer a good country doctor, as he would get busy and try to relieve me.

The way to overcome this nihilistic therapy is to eliminate the great number of medical schools we have, and put those that are left under government jurisdiction. In doing this you will get rid of the haphazard teaching of therapeutics. Adopt some textbooks on the subject that are final, not as we now have it, with the varied works and so-called dispensaries. Eliminate all the obsolete drugs and include none but those of known usefulness. Get men as teachers with actual bedside experience as well as technical and theoretical knowledge of drug-medication. Eliminate polypharmacy and all cure-alls. Make the term at college longer and give more time to the teaching of actual therapeutics. This will eliminate the get-the-dollar college and also the one that lacks the clinical facilities it should have.

When you do this you will find that we possess remedies that are potent and efficient in their action. Take the alkaloids of drugs, many powders and some fluid preparations that are standardized. How do you know they are? There are many manufacturing pharmacists whose preparations are questionable. We also know that many drugs in daily use are absolutely inert. This will be clear to you if you will forget your "isms" and investigate the newer fields of drug-therapy, using the alkaloids and foregoing the shotgun mixtures of the murky past.

In the field of vaccines, antitoxins and serums much has been accomplished in rational medicine; the same in the use of drugs. Have you kept abreast of the times or are you a nihilist? If not satisfied why not use sane therapy in your work in place of the hit-or-miss principle.

Shooting in the Dark

A young doctor once said, "Prescribing is like shooting in the dark, sometimes you hit, more often miss." I am fully cognizant of this fact, having been in the drug business for many years.

Stop knocking! Do not think you are the only It; broaden out, and acknowledge that great men have existed and also will be after you have been forgotten. The most potent cause of the many cults in medicine and the credulity of the laity is our lack of knowledge of therapy and the belittling of our brother in the profession.

Cut it out. I have been in the work long enough to know the nihilist can do a greater good for the health of the community if he will study therapeutic action in health and disease and give smaller and more frequent doses, and use definite drug-principles. By so doing he will get results such as he never got before. He must apply single drugs as to condition and symptoms, and not label every ail with a name and then use some old ready-made prescription simply because the name suggests the treatment. When he has done this he will have made a great stride toward a saner basis of treatment of the sick.

I have met and been a student of the best men we have in this country, in the varied branches of medicine and surgery. I find these men to be very ordinary and painstaking men, who are not so cocksure of their diagnosis and therapy as many whom you meet in your professional work. I have met men fresh from college who would put to shame these men in the matter of lightning diagnosis.

It is beyond peradventure that we need to be very careful in our diagnosis and not be satisfied with snap-judgment, but to study minutely our cases before coming to a conclusion.

The idea of this paper is to get into serious consideration those of our profession who may be simply running a bluff because their patients may not be able to comprehend it. Also to further the great work of alleviating the sick and distressed.

In conclusion I hope we do not have any nihilists in our society.



Proctitis and Periproctitis: A Study of Their Relations to Common Rectal Diseases

*With the Description of a New and Successful
Method of Treatment*

By J. D. ALBRIGHT, M. D., Philadelphia, Pennsylvania

II.

I HAVE already hinted at what I shall now explain in regard to the formation of hemorrhoids. The condition implied by this term has for ages been considered a disease, but under the strict interpretation of this term, it must now be viewed as a symptom, even though we admit that all pathologic manifestations are disease.

Causes of Hemorrhoids

Hemorrhoids occur as a result of proctitis, yet I do not deny that there may be other direct or intermediate causes. Among the former one may mention traumatic influences, such as attend extreme exertion, as perhaps the principal of those which may be termed external causes. Of the intermediate, constipation doubtless stands first. Even this is in effect traumatic, and when all other causes are analyzed, there is not a single one that can not be traced back to causes from without. Yet, the first result of irritating drugs (purgatives), constipation, pressure due to pregnancy, the use of syringe nozzles or irritating detergents, cold or wet seats, is not hemorrhoids, but inflammation, and call it what we will, congestion and inflammation is the ultimate conclusion.

The sacs and pouches within and under the mucous membrane of the rectum, or, more properly, within or under the mucocutaneous integument of the anal canal, make hemorrhoids possible, and before the latter ever form the locality must have been prepared for them. These sacs are, as has already been stated, formed by the bulging of the lining membrane, or of one or more layers of it, because of the pressure behind it; the pressure caused by the imprisoned

exudate which always flows from the seat of any inflammation.

The first office of these sacs is to act as reservoirs for the exudate, which, because of its irritating character, produces congestion and inflammation all along its course, stimulating cellular activity, cell proliferation and tissue formation. Nature, always liberal, provides for the extra tissue an extra blood supply, which in turn contributes nutrition to the new structure, and in due course of time it becomes an organized body known as the internal hemorrhoid.

The Arterial and Venous Varieties

When the seromucus burrows between the corium and epithelium of mucous membrane until the sphincters are reached, forming tiny sacs so thin and delicate that the slightest touch will cause bleeding, the so-called capillary pile is formed, although they can by no stretch of the imagination be called tumors, appearing merely as small, slightly elevated, bright-red spots. As their covering becomes thickened by the proliferation of epithelium and connective tissue, a tumor gradually begins to form in the manner just described, becoming either an arterial or venous hemorrhoid, according to the nature of its principal vessel. As the exudate in these cases finds but little difficulty in forming a pouch, it does not descend much below the anorectal line, where the first obstruction is encountered. Because of their higher location, these sacs usually develop into *arterial* hemorrhoids, explaining in a manner quite satisfactorily the reason for the general rule, high location, arterial; lower location, venous.

When the mucus burrows deeper, under the integument of the rectum, the slight ob-

struction offered by the weak internal sphincter is not sufficient to cause a change in its course, but it travels downward until the powerful external muscle is reached, at the upper border of which the bulging takes place. Here it rests in the midst of a dense network of capillaries, principally venous, and the pile which is later on developed here is generally known as of the *venous* variety. Arterial hemorrhoids always contain veins, and, likewise all venous hemorrhoids contain small arteries.

Anatomical Structure of Hemorrhoids

Hemorrhoids have always been looked upon as dilated blood-vessels. This is a mistake, in part at least, for we now know that a true hemorrhoid is never primarily a varicose vein, for whatever varicosity may be observed is a later development due to compression; but this condition is seldom met except in cases where mixed hemorrhoids, or venous hemorrhoids situated low in the anal canal, are present.

If a well-developed pile-tumor is removed by the knife or cautery and carefully examined, it is surprising to note the number of vessels it contains. I have counted as high as twenty-two with the naked eye, and under a magnifying glass I have seen so many that it was impossible to count them, and they were so fine and delicate that it was impossible to separate them, yet they were perfect in form, showing wall and tubular structure. Between them will be found a dense connective-tissue structure. The external appearance of a protruded hemorrhoid, when circulation is embarrassed, is very deceptive, and we will all admit that it looks like a varicosity. Note that I am dealing with internal hemorrhoids, not the varicose tumors found external to the grasp of the closed sphincter-muscle.

When the exudate finds this internal course, it is evident that it can not at the same time pass down outside of the sphincter, and this explains why it is the rule to find either hemorrhoids or pruritus absent in any given case. Jamison has called attention to this, and Matthews says that the majority of patients operated on by him for

hemorrhoids did not have pruritus. Not a single writer on diseases of the rectum, so far as my careful search of all present-day literature has revealed, has ever offered an explanation of this patent fact, and I feel justified in asserting that until this theory of the development of piles and pruritus was worked out it never has been explained.

External venous tumors are developed in much the same manner. The exudate being profuse, it continues downward until the external parts are reached, forming the well-known anal folds. Finally a combination of circumstances supplies the necessary traumatism and clots are formed, due to pressure and bursting of the veins.

Their development does not essentially differ from that of the internal variety, as already described. I will, however, add that these cutaneous folds do frequently itch, but this is because the condition is essentially the same as in pruritus, when the exudate has burrowed around the anal region. The local effect is precisely similar, and the cause is similar, even though it reaches this locality by a different route.

Fissure of the Anus

This condition, in which the anal integument becomes fissured, is said to be the most painful affection of this region. Without a personal experience to support the statement, I am willing to accept the declarations of those who have supplied the information. It is described as a solution of the continuity of the anal integument, appearing as a linear or elliptical ulcer, varying from one-fourth to one inch in length, frequently involving the underlying structures.

The immediate cause of fissure is usually the passage of a hard fecal mass, but it is evident that if this were alone responsible for the tear, a large portion of our population would be bewailing their fate. The tensile strength of the normal anal lining is such that it will bear a two-inch dilatation without rupturing, and this being the case, it follows that when it is torn during defecation, it must lack its normal elasticity and resisting qualities.

Long-continued inflammation about the anal canal and the invasion of the tissues by the acrid exudate which it causes naturally impair the vitality of the involved structures. Between the redundant folds of anal integument deep crevices form, the floors of which in time become soggy because of the accumulated moisture and the exclusion of air. The combined effect of these causes weakens resistance and so de-vitalizes the integument in the crevices that a moderately firm stool will supply the necessary strain to cause a slight tear from which the more extensive fissure soon develops. The subsequent ulceration depends upon the degree of tissue destruction which has already taken place beneath, as well as upon the number and extent of the sub-mucous fistulas which are liable to form.

Disposition of Fissures

Anal fissure occurs most frequently in the posterior commissure. This has been explained by attributing it to the anatomical structure of the posterior region, the sphincter-muscle affording less support posteriorly than elsewhere, because of the separation of its fibers at this point. This they also do anteriorly, but as the distance from the posterior verge of the anus to the point of attachment of this muscle to the coccyx is greater than that from the anterior verge to the central point of the perineum, the fibers separate more widely posteriorly.

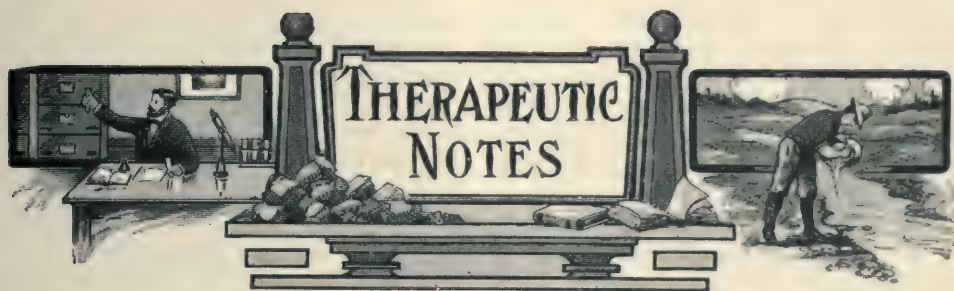
Carrying this thought a little further, we remember that in the female the fibers of the external sphincter are continuous with those of the sphincter vaginae, causing greater separation here than in the male, and this, it is reasonable to suppose, explains why we find women more liable to anterior fissure than men. These theories are all ingenious and have some reasonable basic grounds, but our experience with the ravages of proctitis furnishes others which appear more tenable.

The postrectal space being the favorite seat of mucus reservoirs, their contents burrow through the adjacent structures, and finding a comparatively easy means of egress between the divided fibers of the sphincter,

it insinuates itself between the muscle and the integument of the anal canal, and, when it can not continue its course, it lodges there and begins its devastating work. In women anterior chambers containing this exudate are more frequently found than in men, so it is natural that they should have fissure in that location more frequently than the opposite sex. Laterally, in both sexes, the perianal fascia and the more closely set sphincter act as barriers to the burrowing tendency, preventing the exudate from descending between the muscle and the anal integument.

Fissure, as has been shown, can not, therefore, be attributed solely to the softening of the crevices between the hypertrophied anal folds, for these occur laterally as often as in any other position, if not more so, and if they are punctured, one can usually pass a probe submucously upward, showing that the exudate in these cases has traveled rather superficially. The channels found anteriorly and posteriorly dip deeper as a rule, involving a larger amount of cellular and muscular tissue. It is in these cases, where the cutaneous folds are due to invasion from either the front or the back instead of from above, that itching is most liable to occur, and this condition, as before stated, is practically the same as when the channels are found entirely external to the musculature of the rectum and throughout the tissues of this locality.

This subject is such a large one that one can not hope to convey more than an outline of it in a paper of this length, and if I have been able to stimulate interest in it sufficiently to create a desire for more knowledge along this line, I feel that the aggregate result of this effort will be incalculable. As one who has given special attention to rectal work for over twelve years, I am naturally more enthusiastic than the physician in general practice could be expected to be; yet, I am free to say that if the profession as a whole could be made to realize the part that rectal irritation plays in the progress of all diseases tending toward chronicity, a much higher degree of efficiency in their treatment would be developed.



CROUP AND CALCIUM SULPHIDE

Valledor saw a girl five years of age in an attack of croup. She was given calcium sulphide, a granule every quarter hour, one of quinine hydroferrocyanide every half hour, one each of hyoscyamine and strychnine sulphate every hour. Citric-acid solution was applied to the throat with a swab. The next night the child was up and calling for food. In a similar case, a boy of nine years, given up as hopeless, the same treatment put an end to the danger in twenty-four hours.

NERVOUS CHILDREN

Dr. I. A. Abt, Chicago, argues, in *The Lancet-Clinic* (March 13, 1909), that children should become accustomed to regularity of habit. A strictly well-regulated life without commotion, disturbance or surprises; a program indicating the time for sleep, for food and for play are prophylactic measures against nervousness. This plan should be begun shortly after birth; the time for sleeping, for waking and for food, as everyone knows, becomes, so to speak, automatic if the baby has been properly trained.

IMPURE DRUGS

The strychnine of commerce often contains the sulphates of calcium and magnesium, starch, etc. It is the same with veratrine. To prepare aconitine, cultivated plants are employed instead of the wild. Cicutine is often an amorphous extract from plants, more or less worthless, of several species. Hence the uncertainty of action with medicaments

termed heroic. Granules of digitalin are made without any digitalin, and different products are known as "digitalin" French, German and English. In a word, there is not in commerce anything more requiring caution than drugs.

UNRELIABLE PREPARATIONS OF APO-MORPHINE ON THE MARKET

Dr. Erich Harnack and Dr. Hildebrandt call attention (*Muench. Med. Wochenschr.*, 1910, No. 1) to the fact that many specimens of apomorphine bought in the open market are not only less effective in their emetic action than formerly, but that dangerous complications have been reported, especially of respiratory paralysis. They have found that beside the pure apomorphine, impure preparations are on the market containing trimorphine, which not only counteracts the effect of the apomorphine but is responsible for the toxic effects. It is important that physicians should be careful to obtain their apomorphine, as indeed all their drugs, from reliable and honest chemists.

INTESTINAL PERFORATION IN TYPHOID FEVER TREATED WITH NUCLEIN

Dr. A. Philibert (*Gaz. des Hop.* for Feb. 12, 1910) says that Chantemesse has formulated the following rules for the treatment of intestinal perforation in the course of typhoid fever:

In cases in which a certain diagnosis cannot be made temporize and administer sodium nucleinate, in order to produce a defensive polynucleosis. In connection with this treatment heat (60° C.) is applied to

the abdomen, at intervals, with a special apparatus. Buizard advises to place the patient in a sitting position in order to reduce the extent of absorbing peritoneal surface in contact with the intestinal contents. In definitely diagnosed cases early operation is indicated.

FOR PAINFUL HEMORRHOIDS

When a patient will not consent to operation for piles and the protruded mass becomes very sore and painful, a laxative should be ordered for each night, and after each bowel-movement the hemorrhoid should be washed and dried, and then smeared with a mixture of equal parts of unguentum acidi tannici and unguentum belladonnæ, or better still, with carbenzol ointment. Whenever possible the mass should be pushed within the sphincter after anointment.

NUCLEIN IN PROGRESSIVE PARALYSIS

Prof. Donath of Budapest recommends, in the *Wiener Klinische Wochenschrift* (1909, No. 38), injections of nuclein in progressive paralysis as follows:

Sodium nucleinate 2.0
Sodium chloride 2.0
Water, distilled and sterilized,
q. s. ad 100.0

This solution is to be injected in one or two doses. The injections must be repeated about eight times in intervals of from five to seven days. They cause a rise in temperature. Of 21 cases so treated, 10 were so far improved as to be able to work; in 5 there was subjective and objective improvement, viz., cessation of trembling and of nervousness, improvement of memory and speech. In several improved cases mercury had been used without success. The best results were obtained in initial cases.

CALCIUM SALTS IN MYXEDEMA

Frouin (*La Presse Méd.*, 1909, p. 553; through *Wien. Med. Woch.*, 1910, p. 361) recommends calcium salts for cachexia

strumipriva, or myxedema. He has found that animals which have for some time received calcium salts do not have convulsions after operations on the thyroid glands, as do other animals. These convulsions are probably due to an insufficient elimination of carbamic acid, which is found increased in the urine of thyroidectomized animals. The free administration of calcium salts increases the elimination of the carbamic acid. The author argues that these remedies would probably be of service in cases where the thyroid-gland function is insufficient.

TREATMENT OF TUBERCULOSIS WITH HORSE-MEAT JUICE

Dr. S. Bernheim of Paris has for years insisted upon the value of meat juice in the treatment of tuberculosis, and has more particularly called attention to the superior nutritive qualities of horse meat. In *La Médecine Orientale* for Feb. 10, 1910, he publishes a careful paper on the subject, in which are given the results of his examinations concerning the food-value of horsine, or horse-meat-juice. Compared with beef, he found that 100 parts of muscle contained, respectively:

	Nitrogenous substances	Fats	Glycogen	Mineral salts, phosphates, chlorides, etc.
Beef	21	5.41	Traces	1.18
Horse	22	2.55	1 to 4.50	1.47

Bernheim's actual experience with the horse-meat juice in 223 tuberculous patients was very favorable, and he concludes that horse meat, of all meats, is the richest, the healthiest and best for the purpose of giving strength to the patient.

TREATMENT OF CHOREA

Dr. Finley Ellingwood discusses chorea in the March number of *Ellingwood's Therapist*. The treatment should be conducted on the most rational basis possible. Every possible cause should be removed, and all results apparent which may have been produced from those causes

should be treated promptly and energetically. Any depravity of the blood should be anticipated, and corrected if present. The blood should contain the largest possible amount of red blood-corpuscles, and their full number should be preserved by iron tonics and restoratives.

Attention to rest and to the nutrition of the patient is of importance. Mild artificial digestives, and stimulants like hydrastis, capsicum, and grain-doses of quinine should be given with the food.

Among the agents which may be selected to control the nervous tremors are macrotys, scutellaria, valerian, gelsemium and arsenic. Iron is nearly always indicated because of the tendency toward anemia, and the stomach conditions present usually demand hydrastine, strychnine and digestives, as stated.

WHEN TO TAKE MEDICINE

We are not in the habit of doing our editorial work with shears and inch-rule, but we cannot refrain from clipping the following excellent rules from *The Medical Summary* for February, 1910.

"Alkalis, iodine and the iodides are better given when the stomach is empty as they diffuse more rapidly into the blood. If given during digestion the acids and starch alter and weaken the process. When it is desired to give acids they will be found to be more readily diffused into the blood between the digestive acts. Acidity of the stomach or an excess of gastric juices are remedied by taking acid before meals. Irritating and powerful drugs should be given directly after food. Among this class we may mention the salts of arsenic, copper, zinc, and iron, except where local conditions require their administration in small doses before meals. Silver preparations should be given after the process of digestion is ended; if given during digestion chemical reactions destroy or impair their special attributes and defeat the object for which they were prescribed. Alcohol, tannin and metallic salts, especially corrosive sublimate, disturb digestion and should therefore be

administered during its greatest period of inactivity. Malt extracts, codliver oil, phosphates, etc., should be given with or immediately after food so that they may enter the blood with the products of digestion."

ON THE SURGICAL SIGNIFICANCE OF PUS, BLOOD AND BACTERIA IN THE URINE

Dr. E. A. Codman (*The Boston Medical and Surgical Journal* for Aug. 5, 1909, p. 177) makes a plea for a more careful investigation of cases in which pus, blood and bacteria are present in the urine. Urine should be amber-clear; if it is not, the cause of the turbidity should be thoroughly investigated. This refers not so much to the voided urine as to that obtained by the catheter or at least by the three-glass method. If a patient shows persistent pus, blood or bacteria by the three-glass test or in the catheter specimen, it should be a rule to have a cystoscopic examination made. This nowadays is neither a difficult nor painful or expensive operation. The technic has become "*as simple, safe and sure as the running of a modern automobile*" [however safe and sure that may be. Italics are ours. —ED.]. The author reports a series of seventeen cases in which a differential diagnosis, as to whether the trouble was localized in bladder or kidneys, could only be arrived at by cystoscopy, and in which the treatment made possible through the correct diagnosis was followed by favorable results.

We cite this paper of Dr. Codman's in order to direct the attention of the readers of CLINICAL MEDICINE to this very important subject. Cloudiness of the urine is very often observed without sufficient attention being paid to the source of the symptom. This may mean tuberculosis of the kidneys, or simply a cystitis or some other pathologic condition, which may or may not require operative interference. If the latter is required, the results depend upon the proper time being chosen, and this is only possible by a careful examination of the bladder and of the catheterized or the three-glass urine, as asserted by the

author. To illustrate: Tuberculosis of the kidney may be recognized by a bacteriological examination of the urine, which will contain tubercle bacilli. It requires, however, a cystoscopic examination to determine the possible involvement of the bladder and to determine of which kidney is affected.

PRECISION IN THE TREATMENT OF WHOOPING-COUGH

Dr. E. F. Cushing (*Cleveland Medical Journal*, Nov., 1909) has contributed an excellent treatise on whooping-cough, the careful study of which we would suggest to our readers. Reprints can undoubtedly be had by application to Dr. Cushing. The author affirms that the diagnosis of whooping-cough should be made from the blood-picture long before the first whoop appears, and that precautions taken at that time are of far-greater value than they are later, after the disease has become manifest. While fully endorsing all that the author says concerning the diagnosis and general management of the disease, we emphatically differ with him in the drug-treatment outlined. Belladonna, antipyrin, heroin, or opium in the form of Dover's powder, are hardly, in our opinion, indicated in the adult, much less in children, so long as we possess remedies with much more precise and dependable action. Not one of the remedies suggested is curative, while some are harmful, especially in children.

It is undoubtedly of value to keep the little patients under the influence of atropine, which, however, should not be given in the form of belladonna but as atropine sulphate in dosage of from 1-3000 to 1-500 grain every three to four hours, just enough to keep the face slightly flushed.

In spite of accepted opinions we possess an actually curative treatment by which the attack cannot only be aborted but also be cut short even after the whoop has developed. For this purpose the little patient must be kept fully under the influence of calcium sulphide, so that the odor of sulphureted hydrogen is clearly noticeable. He must at the same time receive full doses

of calx iodata, from 1-2 to 2 grains every three hours. It goes without saying that the process of digestion and elimination must be maintained unimpaired, which is easily secured by a simple diet and occasional doses of an effervescent saline laxative, preceded perhaps by calomel. For tonic treatment, brucine, nuclein, and quinine arsenate are useful. We do not consider it necessary to enter largely into the general measures to be observed or to insist upon the importance of isolation, full consideration being accorded in Dr. Cushing's paper to these phases of the treatment.

LECITHIN IN NARCOSIS

Dr. J. Nerking (*Muench. Med. Woch.*, July 20, 1909) has made numerous experiments on the influence of lecithin administered intravenously or subcutaneously in animals under narcosis from any of the customary anesthetics. According to the prevailing hypothesis the action of volatile anesthetics occurs in such a manner that these agents are taken hold of by the lipoids, or fatty compounds, of the brain and form with them a sort of solid solution. The author has considered that it must be possible, by the introduction of other lipoids, to separate the anesthetic from its union with the brain-lipoids and thus to suspend or circumscribe the narcotic action.

His experiments show that the injection of lecithin exerts an unmistakable influence upon the narcosis, both in its course and its after-effects. The period of narcosis is shortened, sensibility being restored earlier, and the unfavorable after-effects do not occur. The author thinks that like injections should be tried in man in order to prevent undesirable sequelæ of narcosis, or to shorten it.

GASTRIC ULCER TREATED WITH IRON-GELATIN

Bourget (*Semaine Médicale*, 1909, No. 28) through *Wien. Med. Woch.* for Jan. 29, 1910) recommends ferric-chloride-gelatin for gastric ulcer. He used to employ lavage

with a one-percent solution of ferric chloride; but since this is strongly condemned by many physicians, on account of the danger of hemorrhage, he now administers the iron-chloride-gelatin tablets. To prepare these, 100 Grams of gelatin are dissolved in 100 Grams of water containing some glycerin, then adding 50 Grams of liquor of ferric chloride. The mass becomes liquefied by heating, when the ingredients can be thoroughly mixed. After cooling tablets are cut, one centimeter square in size, of which 2 or 3 are taken daily, two or three hours after meals. In severe gastric hemorrhages the author still advocates preliminary lavage with a one-percent solution of ferric chloride.

DISINFECTION OF THE SKIN WITH TINCTURE OF IODINE

Ernst Unger of Berlin, in *Berliner Klinische Wochenschrift*, 1910, No. 2, through *Muenchener Medizinische Wochenschrift*, 1910, p. 155, considers the disinfection of the skin in preparing for operations an important advance in technic, especially for the general practitioner. He has used the method in a series of cases with excellent results. The operation field, shaved dry, was painted with a 10- to 12-percent tincture of iodine, the application being repeated after a few minutes.

TREATMENT OF CIRCUMSCRIBED SKIN LESIONS WITH POTASSIUM PER- MANGANATE

J. Finck of Charkow (*Muench. Med. Woch.*, 1910, p. 186) has had good results in the treatment of circumscribed cutaneous lesions with an excess of potassium permanganate. His method is applicable in chancroid, fungus, granuloma, decubitus, ulcerus cruris, keloid, carbuncle, lupus (if circumscribed); he has also found it of value in old fistulas. A piece of adhesive plaster is cut out in the center, a hole slightly larger than the skin lesion being made, and is placed over the latter; then another piece of adhesive plaster, prepared in like manner, on top of it, and so forth, until a sort of box

results, which is filled with the powdered drug and covered with an uncut piece of adhesive plaster. In the case of ulcers, for instance lupus, the ulcer is destroyed in the course of forty-eight hours, the remaining wound is sharply cut and covered with a crust, beneath which the process of healing goes on promptly without an unsightly cicatrix resulting.

The author's investigations for the treatment of fistulas are not yet completed, but he has succeeded in causing them to heal under the same method, filling them up with the potassium permanganate.

TREATMENT OF HOOKWORM DISEASE

Dr. H. G. Perry of Greensboro, Ala., gives, in *The Gulf States Journal of Medicine and Surgery* for Feb., p. 98, his treatment of uncinariasis, as follows: No supper, a dose of saline laxative at bedtime, 10 to 40 grains of thymol at 7 and 9 a. m., another dose of the laxative at 11 a. m. Look carefully for worms, straining the stools. Often the first course does not produce the desired results. Repeat treatment a second time the first week, and then once a week till the cure is complete. On the days when thymol is not taken give some form of iron. Intercurrent diseases should have proper treatment. No class of patients experience more relief, and as a rule none are more grateful.

ON THE VALUE OF BILEIN AS A LAXATIVE

Glaessner and Singer (*Wien. Klin. Woch.*, No. 52, 1909) through *Muench. Med. Woch.*, 1910, p. 156) have investigated the nature of the familiar laxative action of bile, and have found that it depends upon the presence of bile acids. It is exerted especially upon the peristalsis in the colon, and the authors prefer the administration of the bile acids in the form of suppositories.

The disadvantage in the rectal application of these remedies lies in their somewhat irritating action. We have found that a good preparation given by mouth, such as

the bilein granules, works remarkably well and is free from the objections mentioned.

THIOSINAMIN IN TABES DORSALIS

Müller reports, in the *Medizinische Klinik*, 1909, No. 21, that he noticed that a tabetic patient who had been treated with fibrolysin for urethral stricture felt much relieved from the torturing pains in his lower extremities, whereupon he tried the remedy systematically on eleven other tabetics. In the latter cases he did not use the ready-made preparation, fibrolysin, but the following solution:

Thiosinamin	Gm. 10
Sodium salicylate.....	Gm. 20
Glycerin	Gm. 10
Water (sterile) q. s. ad.	Gm. 100

Of this solution Müller injected into the gluteal muscle 15 minims every other day, and in some cases even every day, 15 minims without the least pain or any side-effects resulting. The patients received, at the same time, iodine in the form of potassium iodide or sajodin in very small doses. Every one of these patients thus treated experienced considerable relief from his torturing pains. In one case the paroxysmal violent gastric pains disappeared, while in another irritation of the bladder and rectum was removed. Some laryngeal trouble in a third patient also became somewhat better. Comparatively more quickly improvement was noticed in the six bladder-cases, these being completely relieved from urine retention while urination became easy. The general condition was very markedly improved in all. This improvement may be ascribed to the relief from pain and consequently better sleep. The ataxial trembling of the lower extremities was relatively less influenced. The objective "diagnostic symptoms" remained wholly uninfluenced.

In view of all these facts, which were clearly established, it is no exaggeration to say that we have here a valuable advance in the treatment of tabes. Furthermore, it should be stated that the patients thus far treated were, with three exceptions, in very

poor circumstances, so that most probably in private practice and with better nourishment, besides the various modern, well-proven physical methods (rest-cure, etc.), still better results could be achieved. At least forty injections should be given.

TREATMENT OF DELIRIUM TREMENS

Petty proposes a new treatment. The indications as he gives them are: support the vital functions, control or arrest the delirium, and remove poisons from the blood.

For the first purpose he advises normal salt solution given by the rectum or by hypodermoclysis, and in severe cases intravenously. This is pushed until the entire circulation is filled with fluids to its utmost capacity, then this fluid is drained off by large and repeated doses of magnesium sulphate. Calomel is given in full doses at the beginning. Give sparteine, in doses of two grains every two to six hours, to supply additional support to the heart and promote the action of the kidneys. Gelseminine is administered in doses of 1-25 grain every one to two hours until its full physiologic effect is developed, unless the delirium and unrest are sooner allayed. "This drug is a reliable cerebral sedative and motor depressant and is not incompatible with any drug indicated in the hyperemic type of cases, but should not be given in the anemia cases. Strychnine, whose action is directly opposite, is given to control the delirium in the anemic cases, but is positively contraindicated in hyperemic cases. In the anemia it increases the blood supply to the brain and thus quiets delirium." Alcohol is reduced but not entirely withdrawn during the delirium.

This plan of treatment has been employed, when indicated, in 450 consecutive cases of chronic alcoholism. Some were delirious when admitted, others developed delirium after admission. In no cases did the delirium resist the treatment longer than twenty-four hours, and in most instances this symptom was overcome in six to twelve hours. No death from delirium tremens occurred in the entire series of 450 cases.



The Involution of Senility

NOT very many authors have occupied themselves with the problem of the involution of senility. Canstatt and Geiss in Germany, Dinj in England, Pinel, Cruveilhier, Charcot, Demange and Brousse in France have studied it seriously; the lessons by Boy-Tessier of Marseilles, however, constitute the best work on this subject and will largely serve as a basis for this article.

When the human being arrives at the last period of his life he becomes decrepit and is liable to succumb to numerous affections that may carry him off the quicker as he offers them but feeble resistance because he no longer possesses the means for combat as in his years of virile maturity. The fact is that when old age comes on phagocytosis is greatly diminished, the antitoxins and in fact all the antibodies are formed in the smallest proportions, and their immunizing properties are extremely feeble, and so it is that the various diseases can evolve without restraint.

Yet all this constitutes no reason for admitting, with Cicero, that old age in itself is a disease—*senectus ipsa morbus*. It is, in fact, simply a specific phase succeeding that of the adult state, and which, in turn, followed upon that of growth. Old age is a phase of regression, of decadence, but this decadence here is a normal one. It is this that Canstatt wishes to characterize by his expression, "senile involution." This designation does not really imply a definite pathologic state, but a series of slow transformations, insidious and progressive in

such a way as not to produce a definite disease. It is the period of senescence as biologists call it, the last stage of living existence verging toward the fatal denouement, the unraveling of it. It is necessary that the physician should know this phase of organic disintegration so that he may act as soon as the symptoms of senility become apparent in his client and proceed to prevent their development.

Old age becomes established when the activities of all the organs of the body are constantly diminishing at the same rate, while when the rate of activity is diminished in one organ only there is disease.

Briefly stated, the organic and anatomic modifications that constitute senility are these three:

1. Pure atrophy of the noble elements.
2. Progressive infiltration of the tissues by organic or mineral elements that are foreign to them.
3. Exaggerated formation of connective tissue.

As a result of these changes we see modifications taking place in the physiologic functions; organic repair is diminished; the phenomena of nutrition are progressively retarded; and this failure goes on throughout the entire system.

The heart and the kidneys become sclerotic. The caliber of the arteries is narrowed, the veins also hardening; the circulation is disturbed, and so the nutrition of the tissues is badly carried on. The heart, in its effort to carry on the fight better, becomes hypertrophied and dilated.

The kidneys, in their turn, become sclerotic and functionate poorly. The poisons and excretions of the organism do not readily filter out of the blood stream, and this gives rise to various and numerous disorders relating to the digestive canal, the liver, the antitoxic action of which is greatly diminished, and the pancreas, whose secretion becomes less active. These troubles are the result of progressive and general atrophy of the glands.

The brain, the nerves, all the dominant organs become dull; memory grows weak; the tympanum is blunted; the crystalline lenses become opaque; the sexual power disappears.

Assimilation is performed with great difficulty. The cells lose their power of repair, and this facilitates the formation of connective tissue. Digestion is performed in an insufficient manner. The waste products and the toxic substances are formed in greater quantities and thus render the period of senility continually liable to sickness.

Senility, therefore, consists in a slow disorganization of the organism, owing to the disturbance of nutrition, to the retrogression of the organs, and to a progressive disintegration; in a word, is due to a failure of the entire economy.

Causes of Getting Old and of Death

It is not age alone that produces aging—getting old. Many a person is old at comparatively but little advanced age, while others are not old at sixty years, or more. Heredity here seems to play a certain part, for there are families whose members present a far greater resistance to senility than is the case in others.

The causes which accelerate senility are numerous, the most important among these being syphilis, alcohol, and various toxic substances, such as lead, arsenic, mercury, tobacco, etc. Nervous causes are hysteria, epilepsy, and tabes. Also prolonged chagrin, violent emotions often repeated, sexual excesses, overexertion in business, abuse of eating.

When agedness has come, then it behooves us to watch over all and every function of

the body, for should even a slight affection strike any one of the organs, the balance is destroyed and death may supervene rapidly.

Every senile organ reports its presence to Death whenever the disease of that organ assumes a preponderating part. Thus we have the cardiovascular form of senile disease, the urinary, the dyspeptic and the cerebral form. Against the last-named condition in the aged therapeutics can do nothing, nor against an acute attack of pneumonia. It may be said that these two diseases are without exception fatal in the aged.

However, in the cardiovascular form of senility it is comparatively easy to secure a prolongation of life in old persons. To accomplish this, the individual must be put on a rigid milk diet, of which about three pints should be consumed in a day. We must also secure for the aged patient perfect rest. Every morning and evening give a teaspoonful of stenol. [A mixture of caffeine and theobromine with a proper excipient.] If the urine contains albumin, then the patient is put on a dechloridation diet.

In the urinary form we must be prepared to combat uremia by a strict milk diet, effervescent saline laxatives, diuretics, and pilocarpine.

Is It Possible to Retard Old Age?

Yes, it is possible. Old age can be retarded by hygienic, dietetic and medicinal measures. Let us consider hygienic and dietetic measures first.

Old people almost always eat too much. They take, practically, no exercise whatever and go out but very little; hence there is no need for great quantities of nutriment to repair waste. At the midday meal they may eat enough to satisfy their hunger, but at evening they must content themselves with little, say, a light soup (either clear or thickened), one soft-boiled egg, a cooked apple or some good ripe fruit, but never any meat, that eaten at noon being enough. They must abstain from alcohol and wine. Milk, eggs and vegetables should constitute the basis of their alimentation. They should avoid game, spices, sauces, condiments,

canned meat, oysters, mussels, crustacea, fat fish like mackerel, eel or salmon. The patient should watch carefully his alvine evacuations, for there is nothing so bad for the aged as constipation. The best medicine for him as an evacuant is an effervescent saline laxative, a teaspoonful, more or less, according to need, in the morning on an empty stomach.

He should endeavor to breathe the purest of air. He should protect himself from becoming chilled, for warmth is indispensable for him; so he should wear flannel undergarments. He should keep his skin in the cleanest and best possible condition so that it perform its functions properly. He should have himself dry-rubbed every day, as a stimulant and for general benefit. Lastly, he should take moderate exercise in the open air whenever the weather permits.

Second, there are the medicinal means. A person of advanced age should resort to medicaments as little as possible. He may employ the vasodilators such as the iodides or the nitrites, which assist in a freer circulation, while retarding the progress of sclerosis. But two medicaments I always prescribe, and these are strychnine and stenol. With these we can combat advantageously the general atony of the aged, their lack of nutritive activity and diminished metabolism. The general circulation becomes better, digestion leaves nothing more to desire, and the kidneys act properly.

Strychnine arsenate in the dose of two granules at the beginning of the two principal meals, or three granules at the midday meal alone acts very well on the general condition and on the digestive canal in particular. Stenol in one- or two-teaspoonful doses exerts a pronounced tonic effect on the entire organism. It overcomes fatigue, facilitates walking, and removes that cerebral depression so often noticed during the last period of life. "It diminishes the wear and tear of the tissues and the organs, and regenerates the nervous and muscular systems." But, remember, these remedies must not be given routine-fashion. They may be given one or the other, or alternately, or in conjunction, or not at all, according to need

and indication.—Dr. H. Vigouroux, in *La Dosimetrie*, December, 1909. Slightly abbreviated by THE GLEANER.

AN AUTOPSY WITH SURPRISES

Rokitansky was unwell and not in the *obduktions-saal* (autopsy room). Dr. Zartchevsky conducted the autopsy. There was not a pathological point to hang a theory on. They came at last to the uterus, when a voice grunted out, "Genug" (Enough!). Zartchevsky was frightened to death, dropped his scalpel and began to cross himself, and getting ready to leave the room he went on crossing himself and murmuring "*Niech Panberg bron!*" (God defend us!) "*Niech bendzi pochwaloni J. C.!*" (Praised be J. C.)

There were just thirteen of us, and one a ventriloquist, and it was Friday, the first of April! This happened some forty years ago.

SUGGESTIONS ON THE TREATMENT OF OBESITY

More recent results of investigations justify more and more the distinction being made between obesity (German, *fettsucht*) and corpulency (German, *fettleibigkeit*). [The humble GLEANER submits the terms "hyperliposis" to denote an overaccumulation of fat in, and "pachysomatosis" to denote a grossness of, the body.] This distinction is of importance also in the therapy of this affection which can not well be the same in both forms.

In this article it is corpulency ("pachysomatosis"), mainly, that is spoken of, which results from overnutrition and "muscular laziness." Unless there be special indications for it, the therapeutic aim can not be merely the rapid melting of many pounds of fat in the shortest possible time. The aim in this condition should be, rather, to institute that systematic unfattening, that reduction of supply in which the corpulent person has learned to keep himself down to that quantity of food which answers the demands of his organism, and at the

same time to accustom himself to a more systematic exertion of his muscular system. The position one should take in estimating the value of the proper therapeutic means can be only that objective one which Von Noorden assumed in his masterly written book, "Die Fettsucht" ("Obesity"). As a matter of principle it is imperative not to swear allegiance to any method to which some special name is attached and put that up as an idol, regarding the patient and his disease as an object for that method.

Muscular activity is of special importance in the therapy of corpulency (*fettleibigkeit*—"pachysomatosis"). Besides the main weapon i. e., dietetics, muscular activity is the most important. Nay, more. It can be regarded as an assured fact that a strict unfattening [let us call it, medically, "depinguation."] THE GLEANER can be better endured along with systematic, gradually increasing muscular work than without it. Muscular work promotes, in the corpulent, both albuminous change (muscle formation) and the feeling of strength. They who have busied themselves with unfattening ["depinguation"] have always experienced that unfattening alone by dietetic means without muscular work often weakens the person, making him less resistant and anemic, while under the combined treatment the person looks fresh, agile, and is strengthened in spite of a restricted diet.

A very noticeable support in the treatment of corpulency are the physical aids, such as hydrotherapy, attention to the skin, hardening against cold, fortifying the nervous system in disturbances of the circulation, and accelerating the loss of weight not, indeed, by melting down the fat but by the giving up of water. In some cases the prescribed quota of work may be specially indicated to be done best by means of certain apparatus.

The only gauge by which we can properly calculate the diet and muscular work are the calories. These make it possible to determine in figures the nutritive value of individual articles of food and also to make an estimate of the value of a physical effect. The fundamental principle in the therapy

of corpulency is to individualize and not to generalize.—Dr. Martin Englaender, in *Wiener Medizinische Wochenschrift*, 1910, col. 108.

ECLAMPSIA AND THE WEATHER

Richard Schlichting, at the suggestion of Prof. Bumm, collected statistics of occurrences of eclampsia and concurrent weather conditions, showing what these conditions were on the days when eclamptic seizures took place. It proved that most cases occurred in April and May and the fewest in June and November. According to Schlichting, the weather, when eclampsias do occur, is mostly either cold, murky, rainy, foggy, while in the summer it is humid, sultry, hot, cloudy, and stormy. (By the way, Berlin midwives speak directly of "eclampsia weather.") The connection between weather and eclampsia is not clear as yet, but it is probable that the weather (frequently a change of the weather) is only one of the factors. To draw any inference on the course of an eclampsia from the state of the weather is not justified.—*Munch. Med. Woch.*, 1909, p. 2712.

FLIES AS INFECTION BEARERS

At a meeting of the Medizinische Gesellschaft of Leipzig, June 15, 1909, Dr. Curschmann reported on his investigations of the danger which flies present as disease-carriers. [Please permit the birth of "germi-ports" as a legitimate brother to "germicide."—THE GLEANER.] Flies caught in the barracks hospital were permitted to walk over plates of Dragalski nutritive medium, whereupon the development of numerous bacteria colonies was observed, among these, streptococci, staphylococci, and colon and typhoid bacilli. The latter especially were abundant after the flies had come in contact with the excretions from typhoid patients for but a short time. Flies, therefore, can transfer infectious material onto nutritive media, thus showing the necessity of fly destruction.—*Wien. Med. Woch.*, 1910, col. 42.



Trouble Ahead for the Dispensing Doctor

IN the February number of *CLINICAL MEDICINE*, as our readers will doubtless recall, we gave warning of the probability that a bill would be introduced in the present Congress which, while primarily designed to prevent traffic in habit-forming drugs, would be so framed as to put a quietus upon the dispensing doctor. It should be remembered that this was the apparent purpose of the notorious Mann bill which was exposed in these columns last year.

The new bill to which we referred was recently introduced in the United States Senate by Senator Shelby M. Cullom of Illinois. As we stated in the February editorial, its apparent object is an entirely worthy one, having our fullest sympathy, namely, the curtailment of the drug-habits. We shall most heartily lend our influence, as we are sure every earnest physician will also, to the enactment of laws aiming to keep these drugs out of the hands of the layman, but we shall just as energetically oppose every effort to tie the hands of the physician, who alone is competent to decide as to whom and under what circumstances and at what times these valuable remedies should be administered. Certainly he, of all men, should be free to obtain them from the sources of supply which seem to him best.

The bill, as introduced by Senator Cullom, provides that every person dealing in opium, morphine, coca leaves, cocaine, alpha- and beta-eucaine, chloral, cannabis, their salts, derivatives or preparations, whether importer, exporter, purchaser, pharmaceutical chemist or manufacturer, wholesale dealer or retailer, shall register with the Collector of Internal Revenue, paying him a special tax of \$10.00 per annum if manufacturer, jobber or dealer in these drugs in quantities, or \$1.00 per annum if a "retailer or distributor at retail."

In addition there shall be levied an internal revenue tax of one cent per ounce or fraction of an ounce upon these drugs, to

be paid by the purchase of proper stamps to be affixed to every original package. This tax shall be paid but once on any given supply. Every person dealing in these drugs, whether in large or small quantities, "shall keep such books, render such returns and give such bonds" as the Commissioner of Internal Revenue may prescribe.

The joker in this bill is Section IV, which reads as follows:

"That it shall be unlawful for any person to sell, or give away, in interstate commerce, any of the aforesaid drugs, or any of their salts, derivatives or preparations, to any person other than a person who has registered and paid the special tax as re-

quired by this act; but that nothing contained in this section shall apply to public hospitals or to scientific or public institutions."

The physician will note that no provision whatever is made for him under the terms of this bill. His only source of supply is apparently to be the retail pharmacist, who, by the terms of this proposed law, is to be given an absolute monopoly of the distribution of these important drugs among the people who are supposed to need them.

Furthermore, it will not be easy for said retailer to secure his stocks, for how is the manufacturer or the jobber to know whether the former has taken out his license and paid his tax? If the latter sells to any distributor under the presumption that he has complied with the law he incurs the risk of a heavy fine and imprisonment.

It is not quite clear whether or not the physician is to be permitted to purchase these drugs for his own needs except from his local druggist, under any circumstances. There is a possibility that he might register under the law as a "distributor at retail," under the presumption that he sells or peddles out morphine or cocaine to people who have legitimate use for them; but this will depend entirely upon the interpretation put upon the law by the Commissioner of Internal Revenue, in whose hands are all the details pertaining to its enforcement. Every retailer or "distributor" is to be required to pay a tax of \$1.00 per annum and secure a Government license.

If the physician does not or can not take out such a special license he will be limited as to his supplies to the brands, quality of drug or form of preparation which the retailer (and in many localities there is only one retailer within a radius of many miles—and in some cases none) may be pleased to supply. He can not compel the retailer (usually a small tradesman of limited capital) to carry a stock of adequate size, variety and quality to meet his needs. He would also be compelled to pay whatever prices may be charged, being practically debarred by law from resorting to other more or less remote but legitimate channels of competition. The

penalties provided are very high: any person who violates the act, on conviction "shall be fined not less than \$500.00 and not more than \$5000.00, and be imprisoned not less than one year nor more than five years, or both, in the discretion of the Court."

Furthermore, according to Section VII it is considered *prima facie* evidence of guilt if the defendant is shown to have or have had in his possession the aforesaid drugs, salts, derivatives or preparations thereof, "unless the defendant shall explain the possession to the satisfaction of the jury." In other words, even though these drugs were not obtained through interstate commerce, any meddlesome busybody who sees 100 morphine tablets or a few ounces of cocaine solution on the doctor's shelf may have him arrested, brought before a Federal Court (no matter how far from home) and tried for a criminal offense, threatened with a large fine and imprisonment, and the burden of proof as to his innocence will rest upon him.

Bills like these are undoubtedly but the expression of the determination on the part of a certain element of the drug trade to legislate the dispensing doctor and all those who supply him with his remedies entirely out of business, or at least to make the former dependent upon the retail drug trade for the remedies which he uses.

Within the last decade or two there has been a wonderful increase in the amount of dispensing among physicians. Today probably nearly 100,000 doctors dispense their own remedies in whole or in part. This custom is increasing and has alarmed the retail drug trade. It is a natural response to an economic condition and can no more be stayed by the hand of law than the wind can be stopped blowing by an act of Congress; but of course it is possible to make the doctor all kinds of trouble by such proposed legislative interference with inherent right, and *the quickest way to prevent trouble is by doing our fighting right now.*

We therefore urge every reader of CLINICAL MEDICINE to get into touch with and use his

influence upon his senators and congressmen, that such modification of this measure may be made as to protect his rights and the rights of those who supply him. This can easily be done in the Cullom bill by modifying Section IV so that it shall read: "but that nothing contained in this Section shall apply to licensed practitioners actively engaged in medical practice, to veterinarians actually engaged in the practice of their profession, to public hospitals, or to scientific or public institutions."

Take this up with your senator and congressman and do it now. Meanwhile write us, tell us what you are doing and what you purpose to do.

It is a time to keep awake and to fight class and trade legislation harmful to yourself. The profession of medicine is unremunerative enough now. What will it be when we are compelled by law to pay a portion of our earnings in graft to a sister profession, with whose difficulties we sympathize but which we shall strenuously object to supporting, even "by Act of Congress?"

Get busy!

THE TREATMENT OF GRIP

On reading the February issue of THE CLINIC, I am very much surprised at the large amount of medicines given by some of the doctors in the treatment of grip. I am very anxious to have some of the "family" try out my own very simple but successful plan. As things are in this section, I am usually called early in the morning and very hastily, often at night, and find a very sick patient suffering with a severe headache and muscular pains almost unbearable. To relieve this I give from 8 to 15 grains of the following mixture, which my druggist prepares for me in bulk:

Acetanilid ozs. 1 1-2
Sodium bicarbonate drs. 6
Ammonium carbonate drs. 3
Caféine citrate drs. 3

Follow this at once with a hot lemonade containing 1-2 to 1 ounce of whisky. This will relieve most of the severe pains for a

while. Then clean out thoroughly, by the CLINIC plan, with calomel and podophyllin, and the saline laxative flush. Then every four or five hours, during the waking hours, I give 15 to 20 grains of sodium salicylate [That's a lot, Brother!—ED.] for four or five days, but this my patients rarely ever take longer than the third day. If I have a very old or feeble patient, I give strychnine nitrate from the start. Out of sixty patients, I have made a second visit to only two of them. I hope some of the "family" will report their success with this treatment.

A. R. WRIGHT.

Renfroes, Ga.

PNEUMONIA SUCCESSFULLY TREATED

I have used a few of the alkaloids for some time, but have lately begun to depend on active-principle therapy entirely. ("Better late than never!" some good brother may say.) The following is my first case of pneumonia, treated according to alkalometric principles:

Boy, age 11 years, had a chill at 4 o'clock Friday morning, was restless all day, complaining of ill-feeling, and vomiting. The next, Saturday, night he began spitting blood. I was called on Sunday at 2 o'clock in the afternoon, finding the patient with slight convulsions, temperature of 106° F., coughing, and severe pain in his right side.

This was my treatment: Calomel, gr. 1-6; podophyllin, gr. 1-6, hourly until six doses of each were given; the intestinal antiseptics; aconitine, one granule every twenty minutes, until the temperature dropped to 103° F.; dosimetric trinity No. 2; calcidin, a dose of each every four hours. Monday found the patient resting well, but temperature still 103° F. I pushed aconitine until the thermometer registered 101° F. Tuesday the patient was resting well, lungs had nearly cleared, temperature was normal, and he felt ready, in his own mind, for a "good, square meal." Is it a wonder I feel encouraged, and delighted with the alkaloidal method?

Just here let me add a word in favor of the Postgraduate Course. Although I did

not enroll as a student, I study the lessons very faithfully every month. Have received lots of pointers and feel that I am getting a general "rubbing up." THE AMERICAN JOURNAL OF CLINICAL MEDICINE "needs no eulogy, she speaks for herself."

D. A. PETTIT.

King, La.

AN EXPERIENCE WITH GRIP

Frank C., aged 25, had been complaining for several days of myalgia, sneezing, hot and cold sensations. He had had a chill at 7 in the evening, and I was called the next morning. I found the throat very red, the eyes injected, pain in both lungs. He was constipated. There was profuse bloody expectoration. I found dulness in both lungs, a temperature of 103° F., headache, the tongue coated. The patient was dejected and discouraged, and said: "I am up against it—got pneumonia. Had the same symptoms twice before—each time in bed three weeks or more."

I took issue with his diagnosis. The family where he was sick were *all* in the throes of a virulent form of grip, and all were improving under the following treatment:

One grain of calomel and soda every half hour until seven doses are taken. Follow in four hours with a dose of magnesium sulphate or castor oil and 10 drops of oil of turpentine. For the fever: acetanilid compound, veratrine, aconitine, or the defer- vescent or the dosimetric trinities. For pain heroin is the last resort, as opiates are not the best in grip and must only be used if *absolutely necessary*; better are mustard drafts, or the old-fashioned prescription: lard, camphor, kerosene, oil of turpentine and vinegar, equal parts, on a flannel, to be applied over the affected parts night and morning, with 5-grain doses of aspirin one to three hours apart as necessary. This will control most pains. If not, I add the heroin, or morphine with hyoscine. For the chilly sensation I use Da Costa's heart stimulant. If much depression or prostration is present I use strychnine to effect. I paint the painful throat morning and night

with a 5-percent solution of argyrol. Every three hours I mop or gargle or spray the throat with dioxogen, pure or diluted one-half, with a three-tip spray having nose-piece, using the crooked tip for postnasal and pharyngeal affections, the straight tip for the fauces. As disinfectant I use formaldehyde, the 40-percent solution diluted, with five times its bulk of water. I put a teaspoonful or more of this in a small pan on the hot stove four or five times a day, instructing the patient to have the doors and windows tightly closed, breathing the medicated air deeply into the lungs and up into the nose.

Now for the cough. Take of spirit of camphor one teaspoonful, oil of turpentine, 10 drops, and of pure apple vinegar half a teacup. Put in an empty baking-powder can or a small tin cup, make a funnel out of coarse paper without printing (for ink is poisonous) and invert the same over this heated cup. The small end is used by the mouth in drawing the fumes of this into the throat, trachea and lungs.

This treatment I myself received at the hands of the venerable and beloved Prof. A. W. McAlester, in 1887, while yet a student, for a severe acute attack of bronchitis. I have been employing it in all cases of pneumonia and diseases of the lungs where the mucous membrane is involved. It has never failed me yet.

When the stomach is irritable, white of egg in water. As long as the fever runs high and complications of the bowels are present, I use beef tea, or squirrel, rabbit or bird-meat bouillon, buttermilk, fruit juices of all kinds, every three or four hours. After the bowels have moved after calomel, I use, in such complications, Waugh and Abbott's intestinal antiseptics, midway between the meal-times, i. e., one and one-half hours after eating. I give this to effect. Now, in addition to all this—the calomel, magnesium sulphate and castor oil—one sometimes has to order enemata. I make it a rule to have the bowels move daily.

Returning now to my patient. Sunday, at 11 a. m., I was called. Monday I made a visit to see that my instructions were car-

ried out in detail, and to reinforce them where they might be wanting. I found him very much improved, and the Thursday following my patient, who had taken "another siege of pneumonia," had left his bed and gone twelve miles to the county seat.

Grippal conditions quickly yield to this clean-out and clean-up method. My fumigant, formaldehyde, I fell upon through necessity. I would invariably bring to my family, and infect them with, the most virulent types of grip, so I hit upon formaldehyde solution, diluted as above, and used it in my home as a preventive. It worked so nicely (and didn't kill us!) that I used it on my patients also.

Have been a reader of *THE CLINIC* for fifteen years.

S. P. STOWERS.

Millerburg, Mo.

[Dr. Stowers has fully grasped the principles underlying the treatment of influenza, and therefore the general management of all infectious diseases. First of all is elimination, the next is support, and the prevention of further infection follows as a matter of course. The case was well managed, and the prompt recovery was a thing confidently to be looked for. Still, the patient did a foolhardy thing to undertake that long journey. He might have suffered a serious relapse.—ED.]

FROM A FLORIDA USER OF THE ALKALOIDS

I have seen no pictures to represent this section, so the family may be amused or interested to see a "cracker" doctor's home and pony outfit. The pony is Florida-raised. They are called "marsh tackeys" or "marsh ponies." Though past 65 years, I like riding better than driving any distance less than ten miles. I use a pair of small hand-satchels, which I connect with a strip of webbing, and place across my saddle.

With a case in each, and bottles and boxes, I carry more than 50 of the alkaloidal remedies, and a dozen others.

I have taken and read *THE CLINIC* from



Home of Dr. J. M. Jones at Interlachen, Florida

its first year of publication. I also used the alkaloids; but it has only been within the past eight years that I have done so to a considerable extent—for the last six years constantly. Now I never fail to use them in every case. I give nine doses of these and synergistic remedies to one of anything else. I could not and would not be without them. I think I am a *physician* with them now; but many times in previous years, and with the "old-time" remedies, I know I have not been so in a full sense.

May you live long, and be happy and prosperous.

J. M. JONES.

Interlachen, Fla.

PEDIATRICS

It is a pleasure to note the improvement in the appearance of *Pediatrics*, which has recently been acquired by Dr. William Edward Fitch. It is larger, more carefully printed and contains a considerable amount of excellent editorial matter. Dr. Fitch has also associated with himself an able editorial board, assuring the production of a magazine of first quality—one which promises to be a real contribution to the current literature of this important specialty.

The subscription price is \$2.00 a year, and it is issued by the Pediatric Publishing Company, 320 Manhattan Ave., New York.

THE STORY OF A BROKEN ARM

I promised you a history of my broken arm. Well, here it is.

About 1863 I was practising medicine in Rushford, Minn. Needing supplies I decided to go to Winona, some twenty-five miles distant, where I could get what I needed. At that early day there were no public or private conveyances, except heavy freight wagons or sleighs. A patron told me he was going to Winona with a load of slack walnut boards and offered to take me along if I could ride that way. I gladly accepted his offer. There was a chain around the boards to keep them in place, and a bag of grain for my seat—a la horseback. So, thinking I could hold on to the

chain for safety and finding my seat comfortable, I set out.

It was a crisp, clear morning, the last of November; the dry air was like a tonic which I greatly enjoyed. The ground, covered with a light snow, was frozen solid. The heavy wheat teams had here and there worn ruts in the road, but I kept watch and clung to the chain. Presently a gust of wind blew my heavy veil double over my face. I let go the chain to remove the veil, when the wheels suddenly slid into a deep rut, striking the hubs against the frozen ground and tossing me off like a ball. Upon getting up I found that my left hand lay tightly against the arm. Several wheat teams were along. I asked one of the men to take hold of my fingers and pull my hand out straight. They demurred, but finally one did it with my help. I then found the radius was fractured, splintered off, and the ulna dislocated. I tried to put the latter in



Radiograph of Dr. Plantz's twice-broken arm

place, but it made me sick and faint. Grasping some snow from the bank I rubbed it over my face, for I was determined not to faint, nor did. They gave me a seat on a load of wheat, but I had to ride ten miles before there was a chance to get a drink of water or bathe my wrist, and five more to reach Winona. I did not have the best of surgical assistance and the splintered bone slipped by and united, leaving the radius 1-2 inch shorter and the ulna dislocated, remaining so, now forty-seven years. The member has always been very painful, but, still, useful.

Now, dear doctor, that I am almost eighty-one years old, I have fallen, as I wrote you, going out of the kitchen door after dark and stepping on the edge of an empty water-pail, whereby I was thrown onto the stone steps, breaking both bones of my left arm, about two inches above the other fracture, and the shoulder also. Now comes the peculiar part of it. I was anesthetized, and the surgeons, not knowing about the change in the length of the radius, tried to reduce the dislocation of the ulna before setting the broken bones, with the result that you will see in the x-ray photograph which I send you by this mail. I hope it will interest you. The surgeons were competent and I do not blame them. The shoulder is not right, but that is my fault.

I am able now, after three months, to do my housework, except the heaviest part. I can put my thumb and fingers together, which is a great help. I am so thankful that I can be useful. When I cease to be of use I hope to try the environment of another world, though I have no fault to find with this one.

LAURA M. PLANTZ.

Putney, Vt.

OPERATION FOR INGROWN TOE-NAIL

A simple operation in ingrown toe-nail is to slice off a section of the overgrown flesh under local anesthesia and rigid antiseptic precautions. The toe can be properly dressed and the former sufferer sent on his

way, loosely shod temporarily, with the full assurance of permanent alleviation from an excruciating condition.

The prompt relief afforded, measures being taken, of course, toward the proper healing of the sensitive part operated on, and the assurance of permanent immunity are sufficient inducement for a sufferer to choose the operation rather than undergo a further day of pain and inconvenience from the cause in question.

Considering the wretched mutilations resorted to in this class of cases in the vain hope of relief, this operation cannot be endorsed too highly.

FREMONT E. WOOD.

Villa Verde, Sonora, Mex.

COUGHS AND COLDS

The quickest way to relieve a cough, in my experience, is to give the patient a good, thorough cleaning out with calomel and saline laxative, and to stop the diet entirely for three or four days, then starting eating this way: for adult, give two pieces of toasted bread and two eggs twice a day, leaving out the middle meal—no meat. This treatment, supplemented by almost any of the anodyne expectorants, has served me for more than eight years without failure. The condition seems to result from some material in the food or from its decomposition entering the blood and causing a general systemic irritation.

I have never employed this treatment in whooping-cough, but it is a success-producer in nearly every disease I ever treated. I cured a leg ulcer in one week with this method, added to the advice given in the "Digest of Positive Therapeutics" by W. C. Abbott. I have practised now fourteen years and have never lost a case of pneumonia, and I attribute these happy results to starvation and cleaning out the system and keeping it clean.

One of my standing rules is never to give food during fever, unless it runs over twelve days, and even then I hesitate, no matter what the cause. Usually I clean up every second day with calomel and use sul-

phocarbolates until the tongue is clean. A well animal never has a coated tongue; when the tongue begins to show more coat, no matter what the color of it, you should get busy, for you will have a back-set; and if you are awake you can prevent it many times, and always meet it half way.

G. L. BAUGHMAN.

Kansas City, Kan.

A MAKESHIFT THAT WORKED

A few days ago I was called to see a woman in the "red-light" district who was fearful that she had contracted gonorrhea. She complained that the cervix and the upper portion of her vagina were extremely sensitive and that she had a profuse leucorrheal discharge. She gave a history of an endometritis following an abortion, some years ago, and said that she had had an abscess in the neighborhood of the uterus, two years ago. She also informed me that she flowed from ten days to two weeks at her regular monthly periods, but never had any pain to speak of at such times, although occasionally she suffered from vertigo because of the extreme loss of blood.

On making an examination I found, on deep pressure, that both ovaries were sensitive, although not to a considerable extent. Vaginal examination, by speculum, revealed some inflammation of the neck of the uterus, with a viscid, nonpurulent discharge. The uterine canal was very patulous, and a sound was introduced to the fundus without meeting any obstruction or causing any pain. I cleaned the uterine canal and vagina thoroughly and swabbed them with a 2-percent solution of protargol. There was very little pain caused by the introduction of the speculum or the following manipulation.

Prior to making the call, realizing that I had no antiseptics other than corrosive-sublimate tablets and phenol, I endeavored to find something else at the local drug-store, but owing to a very incomplete stock,

was unable to find what I wanted. As a makeshift I dispensed a number of intestinal-antiseptic tablets, with instructions to dissolve two of the tablets in a pint of hot water and to employ this as a douche twice a day. I promised to see the patient again in three days. When I called she said that she was feeling better than she had for a long time. She reported that at the end of the second day the local pain and soreness had disappeared completely and the leucorrheal discharge was less than it had been for some time. I instructed her to continue with the tablets in her douche. For the excessive menstrual flow I am giving her Buckley's uterine tonic three times daily, and hope to have a favorable report to make within a month. It is my intention to employ the glycono-magnesium suppositories in order to overcome the uterine discharge.

I cite this case to show what one is obliged to do on occasions when thrown on his resources in an emergency, especially when located a considerable distance from a base of supply, and how a makeshift frequently will get results equal to those obtainable from special remedies for special conditions. I based the use of the intestinal antiseptics, in this case, upon the idea that if they were anti-



This beautiful home is that of Dr. W. H. Landis, Buchanan, Mich.

septic in action within the mucosa-lined intestine, their action would be similar when applied to the vaginal and uterine mucous membranes, and the results more than upheld my conjecture.

This experience shows conclusively that the practician should never allow the absence of any specific remedy to interfere with his work, as he can almost invariably find some makeshift which will do the work.

In this case I have a satisfied patient, because of the relief, and am more than satisfied myself because of the results. Had I waited until it was possible for me to fit the case exactly, the inflammatory process would have progressed and the results been anything but satisfactory both to myself and the patient. As it is, the patient said that I had given her speedier relief than any other doctor she had ever had.

In this case I have a flabby uterus to contend with, one that is submitted to more or less abuse all the while, and in which there has existed an endometritis for a number of years; thus the excessive menstrual flow undoubtedly is due to the atonic condition, combined with subacute and chronic inflammation. I anticipate considerable relief through the Buckley's uterine tonic and depleting suppositories, and shall report results later on. GEORGE L. SERVOS.

Fairview, Nev.

[Since writing the above report, Dr. Servoss informs us that his patient continued to do well with the douches of sulphocarbolates. There was absolutely no reason why the three sulphocarbolates should not have been used in the condition described, and in the manner in which they actually were employed. The name "intestinal" antiseptic does not in any way prevent their use in septic conditions on mucous membranes elsewhere than in the intestines. The present writer remembers having em-

ployed these tablets, some years ago, in the same manner as Dr. Servoss has done and with the same happy results.

We must never forget that we do not treat diseases by name, but that it is con-



The residence of Dr. W. H. Aldrich, Marlboro, N. H.

ditions we treat. Nor are our remedies labeled or limited in their use by their names. Each one of them has a range of indications in which it may properly be used, and in which it may be so used no matter what the name of the particular trouble on hand may be. Thus we find the Buckley uterine tonic pills of excellent service in neurasthenic conditions in male patients even though men have no uterus to be treated. Again, aconitine is the fever remedy *par excellence*, yet it may be given with propriety and confidence in certain forms of neuralgia. (See Shaller's "Guide.") And thus we may find instances all through the alkaloidal pharmacopeia.

The all-important thing is to think, to determine the exact conditions which confront us, and then to meet them with the best means at our command. Dr. Servoss has done well indeed and is very properly gratified over his results.—Ed.]

THE TREATMENT OF TONSILLITIS

I do not wish to be a pig, accepting all the good things, profiting by them, and then

not give anything in return. So I will add my mite in the way of a short description of my way of treating tonsillitis, and that with good results, too. This is for those cases where the physician is called before an abscess has formed—in the latter instance lancing, of course, is the proper treatment, to evacuate the pus.

I begin with the clean-up and clean out, putting the theory into practice by giving 1-10 grain calomel every hour for six or eight doses, following with the saline laxative and thereafter with the intestinal antiseptics, continued throughout the attack so as to keep the bowels sweet. Internally I give the tonsillitis tablets, "Abbott," one every one or two hours, depending on the severity of the congestion and range of temperature.

To prevent the formation of any abscess, I give calcium sulphide, 1-6 to 1-2 grain every hour or two to saturation. Along with this I give nuclein solution in 4-drop dose, as usually there is anemia present—a disorganized condition of the blood. Do not forget to repeat the saline laxative as often as necessary to flush out the intestinal tract and carry off the poisons generated in the fermenting mass.

The local treatment is, in the first place, a gargle, consisting of equal parts of hydrogen peroxide and boiled (cooled) water. This cleans the surfaces of all adhering mucus. This is followed immediately afterward by another gargle having the following composition:

Potassium chlorate drs. 2
 Fluid hydrastis drs. 4
 Glycerin drs. 4
 Water, q. s. ad ozs. 4

Mix one teaspoonful with one of *hot* water, and use as a gargle, repeating every one or two hours, preceded by the gargle of hydrogen peroxide and water. Continue this treatment as directed until the throat is improved; then give the doses of all remedies prescribed less often, until well. After that, in order to build up the entire system, follow up with the triple arsenates and nuclein tablets, one every two or three hours. It is my sincere hope that this short con-

tribution may prove helpful to some of the "family". Let the good work of CLINICAL MEDICINE go on.

W. FRANCIS ERTLELL.

Kalamazoo, Mich.

APOLOGIA PRO SUA VITA

Your recent letter tells me of the receipt of the picture. It also reminds me that I did not send along the frame, i. e., some words telling of "how you live, where you live, why you live."

After a look at myself in the picture sent you, I am not surprised at the last question, "Why do you live?" For, had I been alone in the picture, the verdict would be marked, "road-agent." However, already another has seen the question, "Why do you live?" and she may see this letter before it starts on its way to you. So I would better state in the beginning: I live to Love, Honor, Protect and OBEY the "beautiful wife" (you diplomatically discovered in the picture) according to these ten matrimonial commandments:

First. Never, except for the best reasons, to oppose my wife's will.

Second. To discharge all duties for her sake freely.

Third. Never to scold.

Fourth. Never to look cross at her.

Fifth. Never to worry her with commandments.

Sixth. To promote her piety.

Seventh. To bear her burdens.

Eighth. To overlook her foibles.

Ninth. To serve, cherish and forever defend her.

Tenth. To remember her always in my prayers. Thus, God willing, we shall be blest.

Incidentally I live to "heal the sick," many of whom get well, but are not able to appreciate financially the good result obtained from the administration of clean alkaloidal remedial agents.

Zimapan, Hidalgo, Mexico, is where I live. The town of Zimapan is more than one hundred years old. It is described in Ward's "History of Mexico," published in 1825 or 1827. It has been a mining and

smelting center almost from its beginning. Ninety percent of the population are Indians, so called; but in reality they are but smoky embers of a noble race that has vanished. Each and every stomach of these smoky embers, from adult to infant, is "pulqueized." Pulque is a filth breeder from beginning to end. I have read Dr. James L. Neave's article on "Indian Life" with a kind of "fellow feeling."

My work chiefly consists in looking after the requirements of several mining and smelting operations here and in the vicinity along medical lines, while I also have a practice on the various ranches.

"Why do you live?" you ask. High over all, I live along with my noble helpmeet, who has no superiors and few equals, to enjoy and appreciate this beautiful world



Dr. W. L. Austin and wife, Hidalgo, Mexico

God saw fit to place me in and give me a helpmeet. So to live in the present that I can feel and know that the Bible is the only true light upon one's pathway, and to feel its consolation no science can ever bestow. For:

"No coward soul is mine,
No trembler in the world's storm-troubled
sphere;
I see heaven's glories shine,
And faith shines equal, arming me from fear."

WALTER LEE AUSTIN.

Zimapan, Hidalgo, Mex.

[The editor is glad that his letter, asking for a "story" to go with Dr. Austin's picture,

even though it was couched in somewhat flippant style, brought out the doctor's high-minded reply. He has justified himself—and I opine that the good wife had some share in said justification. "No man liveth to himself alone." Would that every man recognized his duties to others as clearly as Dr. Austin, and had a faith as firmly established in the eternal verities.—ED.]

A WELL-BRIDLED TONGUE!

Last month, while I was out on a social call in the east part of the town, a neighbor came in to telephone for another physician. I was told that a little boy had a fishhook through his tongue. Not being able to get their choice for an hour, they asked if I could do anything for him. I told them that

I should have to go to my office for something heavy enough to cut the hook, and in all probability their regular physician would arrive before I could return. However, in a few minutes the people sent for me to come over.

Arriving at the house, I found a boy of about four years of age with his tongue securely fastened in the buckle of his overalls, he having pushed his tongue through the buckle and the tongue of the buckle had passed clear through the tongue about one-half inch from the tip. I pushed the circular part of the buckle back on the base of the tongue, then raised

the tip of the tongue and let it slide out. Needless to say, both mother and boy were mighty happy.

I shall take pleasure in sending you a report occasionally. Am still a comparatively young man, but have discovered that it pays to get quality when you are buying remedies.

H. M. HOLVERSON.

Boise, Ida.

[It is often these little accidents properly managed which establish the reputation of young practitioners. Thank you for your

little report, and by all means let us have more. Something on your experience with exact therapeutics. Concise and to the point.—ED.]

DISCUSSING THE MEETING

Now that it is nearing the time for the annual round of society meetings the following poem, which we clip *without credit*—since we do not know to whom it really belongs—seems quite appropriate:

"That paper by Slisky was pregnant with thought;
What a wonderful view of the subject he caught,
And—yes, I'll take bourbon—his—never mind ice—
Argument's bully—gosh, that highball is nice!

"The opsonic index seems less than we thought—
O, never mind money. That other man bought—
But vaccines are destined to come to the fore—
Your glass is quite empty. Say, ring for some more.

"That guy from Vienna is twenty years off.
That same operation was done here by Goff.
And—suffering tom-cats, it's surely a sin
To call that concoction a London Dock gin.

"But Bruphy was ready with pretty good stuff,
While Stickney said nothing—but, my, what a bluff—
But the doctor from Texas reported—what's that?
I'll buy a drink, sure! Put don't sit on my hat.

"Gee, wouldn't it be bully if we had the chance
To hear such good papers on science expanse
'Bout once in a week 'stead of once in a year—
Why, hanged if old Davis ain't gone back to beer!

"Say, what's got the matter? Say, Billy, what's wrong?
Let's have a fresh drink—let's all sing a song—
Let's brace that policeman to see if he'll tell —
The street we must take for that blooming hotel."

SALT SOLUTION IN TYPHOID FEVER

I have been taking CLINICAL MEDICINE for more than two years, and as yet have never contributed anything to its columns from the standpoint of personal experience. If the slight information possibly contained herein is of value to any of the "family" I shall feel gratified, indeed.

Typhoid fever, that ever-present problem, has given me plenty of opportunity to use my brains, and I find that cases, especially those where the victims have been allowed to run around at home, either without any

or else with improper treatment, until they have reached that high degree of toxemia due to lack of just plain water in the system, are among the most difficult to handle.

The picture here before us is this: Extreme delirium of a low type; the skin dry, hot, and rough; the tongue dry, fissured and cracked, covered with dry sordes, as are also the teeth and gums; secretions and excretions "locked up;" there is no bowel elimination; kidney secretion is scanty, containing albumin and numerous casts; abdomen is distended. The heart, overcome by this great toxemia, is running along at the rate of 140 to 160 beats per minute, with a small, weak, thready, low-tension pulse; temperature, 104° to 106°F. The entire picture plainly says: "Put on water to quench the fire."

Now, what is the quickest and most efficient method to accomplish this? I answer at once, "Hypodermoclysis and salt solution per rectum." I have injected, in some of these cases, as much as 4000 Cc. of normal solution subcutaneously in twenty-four hours, and given a pint of physiological salt solution per rectum every four to six hours, at the same time. The results have been truly wonderful in the vast majority of cases. The salt solution introduced into the circulation dilutes the toxins, aids diuresis and diaphoresis, puts down the temperature, and lessens delirium.

For stimulation I use fluid extract of digitalis, 5 minims every four hours, hypodermically in whisky; also strychnine nitrate, 1-40 grain every two or four hours. This puts the heart into shape pretty promptly. I have used this dosage for a week to ten days continuously, and when the patient came under treatment in time, I have never seen other than the most satisfactory of results following.

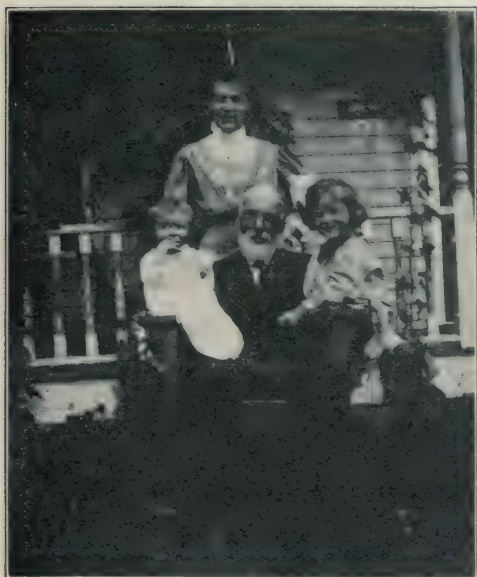
For intestinal antisepsis I use calomel in fractional doses, besides the sulphocarbolates, bismuth, and betanaphthol. If constipated, I administer daily two salt-solution enemas containing one dram of oil of turpentine to the pint, which also relieves distention. For the latter trouble, also, an application of olive oil and oil of turpen-

tine (equal parts) rubbed on the abdomen and covered with hot-packs does very well. For food I order milk, water, koumiss, whey, predigested beef, and if the patient can take it, six to ten raw eggs daily. Those patients who are able to take the most nourishment, as a rule, do the best and have the least complications. I should like to hear the experience of others in regard to the use of normal salt solution in typhoid fever.

E. L. Haswell.

Albany, N. Y.

[The Doctor's suggestion relative to the salt solution is indeed excellent and we hope many will respond with "experiences",



The wife, children, and father of Dr. B. W. Kelly, Aitkin, Minn.

such as he requests. We agree that it is of the utmost importance to combat the toxemia; it is for this reason that we insist so strongly upon cleaning out the bowels thoroughly, and upon deodorizing the stools with the sulphocarbolates. If this is done, and *well* done, the symptoms of intoxication almost always rapidly diminish. In any severe cases in which the toxemia does not yield to these measures, and promptly, Dr. Haswell's suggestions deserve a trial.

They are based upon sound logic and must without doubt prove of benefit in many instances.—ED.]

ALKALOIDAL PRACTICE; SOLUBILITY OF GRANULES; "OLD-AGE" SERUM; MAGNESIUM POISONING

In looking through the February number of CLINICAL MEDICINE I find an article written by me. And this reminds me of an anecdote told me by a doctor. The doctor was a musician, and while being shaved one day he was annoyed by a darkey, the bootblack of the barber shop, thrumming away on an old guitar.

The doctor said to him: "George, why don't you play something else than that eternal thrum, thrum, thrum?"

The darkey looked up, somewhat surprised, and said, "Well, Doctor, I'll tell you. I's been around 'siderable and I's heard all sorts of music, and I'll tell you, I had about as soon hear myself play as any music I ever heard."

This article of mine is, to me, about as readable as any that I've seen. What contributor is it that does not enjoy reading his own productions?

I met Dr. R. K. Ogilvie of Blodgett, Missouri, this week, and he is about as enthusiastic an alkaloidist as one ever sees. He has thrown aside galenicals entirely. He and his brother Fred are doing an immense business. Dr. Roy says that the H-M-C tablet is a success and a money-getter. He uses it extensively without any fear of the evils which are said to follow its use. He, however, advises the profession not to use it in connection with atropine because the combination makes the patient as wild as a buck.

Granules.—They get hard and do not dissolve readily in cold water. If you do not believe it, try a few of the morphine granules that have been on hand some time. Morphine is as soluble as any remedy used, but morphine granules are not. Try it before replying.

By the way, your stunt in answer to Brother Lloyd is like "George's music,"

but your premises are not so well taken. Alcohol, when it has an alkaloid or any other medicine in solution, will always make good when you give it. It is soluble—see? Solubility cuts a large figure in medicinal effects. A tablet of morphine and quinine

so. What an old man under the influence of frog serum would do would not look well in print. So I will not describe his stunts. And for the benefit of Brother Abbott and others who wanted their turn I stopped the manufacture and sale of these sera, and I

will prosecute to the full extent of the law any male or female who undertakes the sale of these sera.

Is "Magnesia" the Cause of Chronic Disease?—Dr. John Aulde of Philadelphia (see February number of *The New York Medical Times*) says it is. If magnesia is the cause of chronic disease, is it not also the cause of acute dis-



A Wisconsin winter scene—home of Dr. A. D. Campbell, Richland Center

might pass through the alimentary canal undissolved, but a teaspoonful of alcohol solution could not. See?

Brother Lydston is graphical on the race-question, but nothing except time will settle it.

Frog and Turtle Sera.—Your Baltimore correspondent tries to be original and may be as to the salt-water question, but when it comes to frog and turtle sera, I am the original. I wrote these up for the *A. M. A. Journal* years and years ago. A French professor tried to down me on the turtle question, but I showed conclusively that he was a back number. I had letters from Georgia and other states inquiring as to details of my discovery and methods. The turtle never dies a natural death; and the occasional use of turtle serum would make a man live so long that Methuselah would not be in it. I was afraid to distribute turtle serum for fear some of my enemies might get hold of it and live forever. The frog serum also had a disastrous tendency. "An old man cavorting around like a two-year-old"—well I should remark—and more

ease, chronic disease being only a continuation of the acute?

Look out, Brother Abbott, this is an effort to knock "autointoxication" of the Christmas tree—especially the intestinal part of the program. "Alkalescence" has an alkaloid sound, but the two will not jingle. I am acquainted with a doctor who gives as a cause of all disease, blood poison. Brother Aulde goes him one better and names the element in the blood which does the mischief. Let me here suggest a plan by which Brother Abbott may escape this predicament—viz.:

Yes, magnesia infiltration caused auto-intoxication, but the hair of the dog is good for the bite—so for the trouble caused by magnesia infiltration give magnesia. Isn't that logic?

Brother "Square Deal" Abbott, face the music, and what you lack in dancing make it up in turning around.

Profundity.—This faculty is one I have always dreaded, and in order to keep as far away from it as possible I have cultivated the habit of looking at the ridiculous side

of any and all questions, and I find that my side is easier of comprehension. Profound thinkers have much more glory and money than I have, but they do not have half as much fun—that is, real pleasure. Prof. Aulde will get glory out of his discovery and possibly some money, but he cannot enjoy the side-splitting laugh which comes to me when I read such articles. "Amber beads," for croup, eh? Amber beads around the neck. Destroying magnesia infiltration, eh! Go to, now, Brother Aulde, you cannot poke that down a Missourian. Your discovery would probably have passed muster if you had left off treatment, and for fear I spoil this squib, I close.

W. P. HOWLE.

Charleston, Mo.

Life is a serious matter, and medicine the most serious part of it, nevertheless it would be better for humanity if a good many more would cultivate Dr. Howle's suggestion to look on the humorous side of things. The world never has too many laughs, unless it laughs at truth, which is not amusement but depravity.

Dr. Howle mixes up two totally different propositions: the keeping of medicine, and their administration. Most patent medicines do not keep well in solution; they deteriorate from the decomposition of the alkaloids and the menstruum employed, so that the actual strength of the remedy is often a sort of a guess. They keep forever when made into granules. If these granules are not made sufficiently hard they are likely to break up, and instead of granules or tablets the doctor finds a lot of amorphous detritus in his bottle which it is impossible for him to use.

The administration of the granules is another matter. They are not intended to be administered always in the solid form; they may be dropped into a cup or glass of water, the quantity being carefully measured so as to have the dose accurate. Only enough should be left to last until the next visit. In that way you get all the advantages of fluid administration without the disadvantages of fluid preservation. However, when given in solid form the granules are invariably active. This fact, to the best of our knowledge, has never been questioned. We have granules in our possession which were made fifteen years ago and they are today as promptly efficient, apparently, as the day they were made.

In regard to the statement that magnesium is poisonous, the main difficulty is that it isn't true. There is not another remedy on the face of this globe which is quite so common as epsom salt, and when one says that



Dr. P. W. Pearsall, in front of his home at Kalkaska, Mich.

epsom salt exerts a poisonous action when given by mouth, he says what every man and woman of average comprehension knows to be untrue. When it is injected into the blood, that is another matter altogether, but people as a rule don't take the chemical in that way.

Guaiacol when rubbed into the skin is a tremendously powerful antipyretic; taken by the stomach it is nothing of the sort. Apomorphine injected hypodermically is the most effective of emetics; taken into the

stomach, however, it simply increases the secretion of the respiratory mucous membrane without causing emesis, even when given in doses of 1-4 grain. These things are too well known to require stating. More power to you, Dr. Howle. Stick to your last, and to your common-sense views of matters in general.—ED.]

CORSETS FROM A SURGICAL STAND-POINT

Corsets are an essential in women's dress, and their selection should be gauged by their ability to fulfil three requirements, namely:

1. Construction on proper mechanical and physiological principles.
2. Ease of application and readjustment.
3. Style and appearance.

While it is undoubtedly true that the average woman will reverse the relative importance of these three essentials in making a selection, it is therefore imperative that the garment appealing to the customer from the standpoint of style and appearance shall also contain the other essentials.

A corset properly constructed and adjusted instead of being a hindrance to proper freedom and movement or a menace to health is not only a decided advantage, but is of great aid in correcting malformations of the figure or displacement of viscera, and by such correction of abnormal conditions acts as a positive therapeutic agent of great value.

A woman should be no more conscious of her corset than she is of her shoe or any other part of her attire. This unconsciousness of a garment, which is of very necessity, as a result of its construction, a more or less rigid and inflexible part of her outer self, can be attained only by a corset which is correct physiologically and mechanically.

While it is true that minor changes are made to correspond to the vagaries of fashion, no deviation is ever made from the correct mechanical principle involved in its construction. The corset must be made to fit the figure, not the figure to fit the corset. This does not mean that the errors of posi-

tion or figure, for which a woman herself is responsible as a result of habit, are to be condoned or allowance made for them in fitting the garment, but that these conditions are corrected with the wearing of the proper corset.

A corset may be considered, elementally, as consisting of two planes, an anterior and a posterior, which are approximated by the action of laces. Considering the corset as a part of the figure of a woman, and constructed to follow as closely as possible the mechanical features of the human frame, it will be apparent that there must be a rigid, intact portion corresponding to the practically immovable dorsal spine, which gives support to all the structures in front through muscles, ligaments and peritoneum attached to it. Thus the dorsal portion of the corset must serve as the point from which the necessary support is given to the front of the garment.

In a front-laced corset, alone, these mechanical features are logically and consistently worked out to the comfort, convenience and satisfaction of the wearer. From the very construction of a back-lace corset, which is at variance with the principles outlined above, it is evident that garments so constructed are lacking in some of the three essential features which are first principles. Add to these virtues those of appearance, style and ease of application and the desirability of a front-laced corset is obvious.

The use of a proper corset from a surgical standpoint may be considered under three heads, viz.:

1. For deformities of the bony skeleton.
2. For support of weakened muscles or ligaments.
3. For postoperative support.

While it will hardly be claimed that the corset can take the place of a plaster cast in spinal affections, it is true that it may very appropriately follow up such treatment when a less-rigid support is demanded. The solid back of the garment affords just the degree of stability needed and the front lacing allows of proper adjustment as to location and pressure.

In scoliosis, with much deformity, the corset is most valuable from the improvement it is possible to obtain in the figure of the wearer. Pads can be so arranged by a properly qualified corsetière, under the suggestion or personal supervision of the surgeon, that even a very decided malformation may be completely overcome. After once having been properly fitted it is easy for the wearer herself to apply the garment and to regulate the tension by the front lacing.

Large, fat, flabby and pendulous abdomens are admirably taken care of with the minimum of effort and discomfort on the part of the patient. The corset should be applied with the laces loose, and after the steels have been fastened together and the garment properly laced, the necessary traction to confine the redundant tissue may be made by means of the lacing. It will be apparent that a much more satisfactory adjustment can be made than with a back-laced corset when the garment must be "set" by guess, and by wriggling, twisting and squirming the unfortunate woman, often with outside aid, finally encases herself in a support which does not equally distribute the superfluous tissue.

An attempt has been made by certain manufacturers to incorporate this great advantage of the front-laced type by the addition of so-called reducing straps to the back-laced corset, and while such a contrivance may be of a certain advantage, it cannot produce an adjustment which is perfectly satisfactory.

In postpartum conditions, when the anterior abdominal muscles are necessarily relaxed and when support and aid are imperative, the front-laced garment possesses distinctive advantages. By starting the process of lacing from the bottom it is possible to support the muscles, ligaments and viscera properly without danger of displacement from undue pressure.

Nephroptosis and the distressing symptoms often resulting therefrom is greatly relieved, and the symptoms are made almost, if not quite, to disappear by the front-lace corset properly fitted with the addition of a pad to produce support where needed.

It is possible to do infinitely more with such a contrivance than can be accomplished by the use of bands. The patient should be instructed in regard to the proper application of the garment, which should be put on before rising, thus preventing the possibility of a strangulation. A slight elevation of the hips by means of a pillow will, in extreme cases, make the adjustment and application of the corset of greater value. In this position gravity aids in keeping the kidney in place. The patient should be cautioned against standing before applying the garment, for the jar incident to an assumption of the erect position may be sufficient to displace the organ, and the application of the corset and pad with the kidney displaced may do great damage.

Gastroptosis and enteroptosis with their accompanying symptoms, pain, dragging-down sensation, and gas formation, are amenable to the same relief from the same source. In these conditions also the properly adjusted pad securely fastened to the corset, to avoid the possibility of its being displaced, has been found of great value to the patient and an aid to the surgeon in the handling of the case.

It is of course understood that these measures can only be palliative at best, but there are many cases which from one reason or another are inoperable and in which some means of relief is therefore imperatively demanded. In these cases, as in nephroptosis the corset should be applied while the patient is in the dorsal position, which is easily accomplished in a front-laced garment.

Umbilical hernia is greatly relieved, and if not too extensive may be indefinitely supported by the corset and pad. As this condition is usually found with large, fleshy abdomens, what has been said under that head will apply here.

Displacements of pelvic viscera, while not directly affected by the corset, are nevertheless indirectly so either favorably or unfavorably. The disrepute in which the corset was formerly held by physiologists was due almost entirely to the wrong use of garments constructed on wrong principles.

A corset constructed and applied as in the old style could not but be a positive menace to health and a detriment in every way. Its hour-glass construction of the waist, pushing the soft, yielding abdominal organs both up and down, thus producing injurious pressure on heart and lungs and on bladder and uterus (the latter pressure aided and augmented by the down-pull of tense garters) was truly an instrument of torture. Not only was it injurious to health but it failed to give grace, beauty and symmetry to the form and deserved to be discontinued.

Compare such a contrivance with a garment which not only molds, preserves and intensifies the natural beauty of the female form but is absolutely correct mechanically and physiologically, supporting the abdominal contents and lifting all pressure from the pelvic organs, allowing proper expansion for the lungs and free action for the heart. Such a garment cannot possibly be a harm but is of positive virtue and benefit.

In postoperative cases, when a slight support is needed for the incision and the surrounding tissues, a properly fitted corset leaves nothing to be desired. After any operation the muscles and ligaments are more or less relaxed and flabby, due to enforced lack of exercise, restricted diet and anemia. Add to this the weakness of the incision with newly uniting tissues, and some support is imperative. Most women will experience a sensation of comfort and confidence in assuming a corset at this time, and it will serve a useful purpose as well.

In conclusion we might summarize as follows:

First. The corset is a necessary article and if properly constructed is a benefit from a standpoint of health and appearance of the wearer.

Second. Proper construction depends upon the application of the principle upon which the human figure is built, i. e., a rigid, firm back from which as a support the anterior portion is flexible and easily adapted to change of position.

Third. A front-lace corset embodies these features as well as those of ease, of application and readjustment.

Fourth. A corset may be of great aid to the surgeon when applied with intelligence and proper appreciation of its principle of construction and the application of that principle to pathological conditions.

HEAVY BABES; ALSO HIGH TEMPERATURES

I notice that Dr. Evans calls me down, because I referred to 17-pound children as "obstetric fancies." Now, Doctor, my skepticism of the reports of such prodigies which I continually hear is not dogmatic but practical. I doubt them, not because they upset decisions, but because of the sources from which they come. I find, in talking to almost any group of women, that in their very limited experience they report wonders which we, with hundreds and possibly thousands of cases, are unable to verify.

If, however, my statement implied that such cases never had or will exist, I willingly make correction. In Dr. Evans' case I have no reason to dispute his figures. He was there, I was not. But the tendency among most patients to believe the marvelous and absurd is so strong that their statements are open to grave doubt.

We have parallel instances in reports of hyperpyrexia. I think we have fairly well authenticated temperature as high as 111 degrees. Still, if someone were to tell me that he had observed in a patient a temperature of even 112 degrees, I should consider the statement as probably the result of an error of observation or of an unreliable instrument.

A medical friend once asked me to see a case of puerperal infection. The doctor had found a fever of 110°F., and had given a bad prognosis. One hour afterward the thermometer registered about 102°F., with no evidence of any special trouble. My friend was a conscientious observer and insisted that his figure was correct. From the collateral evidence, however, I am convinced that it was not.

Then, if such discrepancies creep into medical observations, what value can we place upon even conscientious lay testimony?

H. O. CARRINGTON.

New York, N. Y.

ALBUMINURIC BRONCHITIS

Dr. Em. Novel (*Gaz. des Hop.* for Feb. 10, 1910) describes a case of bronchitis which failed to yield to the ordinary treatment of the affection. He finally had the urine examined and found it full of albumin, which explained the nonimprovement. The author calls attention to the importance of examining the urine in obstinate bronchitis, and of correcting a faulty renal function if this is present.

UNTOWARD ACTION OF ACONITINE IN PNEUMONIA

In the following we wish to report some observations in regard to the untoward effects of aconitine in the case of a boy 8 years of age, the subject of lobar pneumonia, or, as we believe, appendicular pneumonia. After prescribing aconitine for a number of years, this was the first time in our experience that toxic effects were noted. Failure to secure proper "cleaning out and cleaning up" were factors in the early part of the treatment, owing to negligence and opposition on the part of the parents.

The clinical features were high fever and absence of cough and expectoration until the third week. The patient was seen daily. The dosimetric trinity was administered according to Shaller's rule, and the aconitine given for from twenty-four to forty-eight hours, and then discontinued for the same length of time. On the tenth day the evidence of toxic action was very pronounced, which however completely disappeared in twenty-four hours on discontinuing the remedy. We believe that this would have been averted had proper intestinal action and clinical asepsis been secured early in the course of the disease.

Unless intestinal elimination and asepsis can be secured and maintained there must

always be uncertainty in the action of aconitine, and danger of cumulation and poisoning systemically.

PENNEBAKER AND TRIPP.

Harrodsburg, Ky.

[Toxic action from aconitine is so rarely seen, or at least reported, that a letter like this one has become almost a curiosity. When such a report does come in we always suspect either some idiosyncrasy or that the symptoms are due, not to the aconitine, but to some trouble inherent in the disease. Of course this remedy should be given only with extreme caution during depressed states. When the bowels are inactive aconitine usually is less likely to be absorbed and therefore less active, but our friend's suggestion that there is danger of cumulation in such instances deserves careful consideration. Who has had a similar experience?—Ed.]

THE USE OF FATS IN TUBERCULOSIS

The following article is a very full abstract from Dr. Louis C. Rouglin's paper which appeared in the *Atlanta Journal-Record of Medicine*. We consider the subject of feeding and nutrition in tuberculosis of sufficient interest to quote copiously from the original.

"The attempt of many physicians to promote an increase in weight in tuberculous patients by an indiscriminate process of stuffing is just as erroneous and unscientific as is the insisting on certain kinds of foods to the exclusion of others as a matter of routine. From my personal experience, I am still convinced that I was correct in advocating before the American Tuberculosis League more than five years ago, that in regard to diet, 'each individual case must be separately studied, and diet prescribed to suit the case. It is far better to let a patient have a varied diet of nutritious character which he can assimilate, than to stuff him indiscriminately with a restricted regimen of diet.'

"We must always bear in mind that the relative proportion of ingested fats, proteids

and carbohydrates per kilo of body-weight has no invariable relation to the nourishment of the individual, that is, the caloric value of the food eaten by the patient is not a criterion of the caloric energy imparted through the process of digestion and assimilation, therefore, in view of the various functional and organic changes so common to tuberculous patients, it becomes at once apparent that the important diet is not so much the definite quantity of food, nor the relative proportion of its ingredients, but rather the completeness of its subsequent assimilation and the reduction of its strain upon digestion.

"Fats meet this condition most admirably, as by their use we can obtain more than double the value of energy producers than from either the proteids or carbohydrates, its by-products are entirely harmless to the organs of excretion, and their presence in the circulation are less deleterious than that of by-products of proteid oxidation, and when a suitable form is used, fats are easily digested and readily assimilated.

"The demand for an excess of fat is in no disease more pronounced than in tuberculosis, since it manifests itself by the wasting of the subcutaneous fat, and long before any scientific investigations had been made, the favorable results from its use had led clinicians to believe that it exerted a specific action in this disease, especially in the form of codliver oil, but unfortunately its nauseating character, its difficulty of digestion, and its consequent disturbing and deleterious effect upon the digestive organs had led many to abandon its use.

"In the cotton-seed-oil emulsion we have all these features eliminated. When given properly, it is borne by the most delicate stomach, and in my experience at Pine Ridge Sanitarium, I have not yet had a patient who under a proper administration experienced any difficulty in taking it, in fact, most patients grow to like it, and its superiority over other preparations is evidenced by many cases in which other oils and emulsions had become repulsive, but where the cotton-seed oil was readily taken with a rapid improvement in digestion and

nutrition as evidenced by a decided gain in weight."

The author presents the histories of six interesting cases, which are cited not as an exception, but as representing only a few from a vast number of similar cases, where the superiority and value of cotton-seed oil was manifested from the very beginning. He concludes that if we agree with the universal statement of all authorities on tuberculosis, that the most reliable guide of the patient's improvement is his gain in weight, we possess in cotton-seed-oil emulsion an agent of the utmost and vital importance in the management and treatment of this disease.

MAGNESIUM-SULPHATE DRESSINGS FOR SPRAINS AND OTHER INFLAMMATORY CONDITIONS

I notice that in the January number of *CLINICAL MEDICINE* you ask for reports on the use of magnesium sulphate in the treatment of inflammatory conditions. In a saw-mill practice of four years I have had any number of sprains and bruises and similar lesions to treat, from the slightest to the severest forms.

My treatment for such injuries, where the skin is not broken or only slightly so, is to dissolve two heaping tablespoonfuls of epsom salt in one quart of water as hot as can be borne comfortably, and to apply thick compresses wrung out of the solution, changing for a fresh one as soon as this one cools, and I keep this up for thirty or forty minutes, three to five times a day, or as often as pain returns. I find that under this treatment the pain is relieved, the swelling is reduced, and the patient is up and about and ready for work much sooner than under the old way of treating such injuries.

I have used the same-strength solution as above, but cold, for burns of the first and second degrees, not however with any great amount of satisfaction.

I am a strong believer in the jugulation of disease by active therapeutic measures, and have some interesting experiences

with alkaloids that I may report later. Success to you and your work.

S. D. MOTLEY.

Hollins, Ala.

[Your experience with solution of magnesium sulphate is identical with that of many physicians who write to us. The present writer always insists on having the water not only as hot as can be borne with comfort but as hot as can be borne at all—and then a little hotter. I find that in this way I get still better results.—ED.]

MAGNESIUM-SULPHATE: A PROTEAN REMEDY

I was a little amused when reading the January issue of CLINICAL MEDICINE. There, on page 107, I observed your request for letters on any one or more of some half-dozen troubles, and then on turning the leaf was confronted by that article on epsom salt.

Whence the amusement? Well, because that very chemical is the principal remedy for treating more than one of that list of disorders mentioned.

Thus for grip I give calmel, 1-10 grain for four or five doses, followed by magnesium sulphate and then the sulphocarbolates, after which I prescribe such other internal medication as the individual case may seem to require. But I never neglect to order an epsom-salt bath at night, one ounce to the pint. This bath is repeated as seems advisable.

So in rheumatism, the epsom-salt bath will accomplish more, in my hands, in a curative way than any or all other remedies. In this case I add 10 drops of oil of wintergreen to the pint. If you have never tried it you will be surprised at the results if you do. Just ask the nurse to let the water stand for a time after the bath and then note the sediment. Many times I have been greeted with "Where does that all come from? I thought I was clean." The sediment, a reddish brown granular-appearing deposit, will be found as long as the rheumatism remains, lessening as the condition improves.

"Cold in the chest"—threatened pneumonia—too, is benefited markedly by sponging, particularly the chest, with this solution of magnesium sulphate and putting a compress wet with it over the lungs and covering with dry flannel. In lung troubles, however, oil of eucalyptus is to be used instead of that of gaultheria.

For erysipelas this same solution excels, in my hands, any or all other applications either with or without the addition of carbolic acid, say 10 drops.

Cold in the head—coryza? Why, the coryza tablet (containing atropine, aconitine, morphine and calomel) of course—nothing better. The magnesium sulphate, properly administered, in addition to the granules, will do more for me than almost any other medicament.

This is a sort of meandering epistle, not much to it; but I felt like it, and *ecce litera*.

Let us hear more about chromium sulphate.

S. P. TRACY.

Walkerton, Ind.

[Wish more of the "family" would give "meandering" notes like these on therapeutic subjects!—ED.]

THE STERMAN THEORY REGARDING TETANUS

I note with pleasure and satisfaction the report of six cases of recovery in patients treated for tetanus by lumbar puncture and the injection of a 25-percent magnesium sulphate solution after withdrawal of a sufficient quantity of cerebrospinal fluid. It is pertinent in this connection to inquire how much gas was allowed to escape with these withdrawals and also pertinent to note that the tappings were in some cases frequently repeated; also to inquire, in view of my recent theory of gas formation, whether results would not have been just as satisfactory without the magnesium sulphate.

Also, I would inquire whether the sole action of said salt was not a purely chemical one, in neutralizing the gas. The Sterman theory, as it has been recently called, in re-

gard to the formation of gas within and around the cerebrospinal structures, is not a theory—it is an established fact and one of paramount importance, revolutionizing the pathology and treatment of tetanus. Although the technic remains to be perfected it will be the basis of future relief and therapeutic satisfaction.

WILBUR F. STERMAN.

Winterset, Ia.

THE OTHER SIDE OF SURGICAL FEE-SPLITTING

An anonymous writer in *The Illinois Medical Journal* deplores the fact that some specialists, notably surgeons, give a part of the fees they receive to the family doctor in return for his loss of time, more or less trouble and serious responsibility in accompanying the patients to the city, assisting in the operative work, etc.; yet the writer enquires how it is that his competitors, who condemn "division of the fee" by specialists, in the discussion of economics at the local medical society, grow rich while he remains poor.

The answer involves a curious development of the relation between the general practitioner and the modern specialist. Time was when the family doctor, bowed down with the accumulated weight of years and professional dignity, took his patients to the "great city specialist" for treatment or operation, expecting nothing, getting nothing but the "thanks" of the grateful patient—if everything turned out well; or receiving a "cussing" or worse if results were not satisfactory.

All this trouble, anxiety, responsibility and loss of valuable time and money were regarded as a part of his "professional duty." To expect or accept a part of the fee would be unethical, even if the patient knew that the fee would include something for his services. The "leaders" (chiefly specialists, be it noted) assured him that such a division of the fee would be "unethical business"—with no suggestion of which our "great profession" should be tainted. And in his old age this excellent family doctor

was supported by his daughters' salaries as teachers, may be, or the like.

But later some of these physicians "got wise"—they thought they should have at least a part of the fee in return for all they were doing; and they demanded (and received) some portion of the sum charged by the specialist, usually without letting the patient know of the transaction. Herein arose a possibility for "graft"—and strange to say, the "howlers" against "division of the fee" under any and all circumstances have "played into the hands of the grafters." The great and good leaders of ethical conduct, the above-suspicion molders of professional sentiment, the men who would not divide the fee under any circumstances (if there were a possibility of being found out) have done much to help the "honest general practitioner" to the latest phase of professional deception.

The first effect of the opposition to and condemnation of division of the fee between surgeon and family doctor has been to lead the latter to try to do operative work for which he is ill fitted. Every community today has so-called "surgeons" attempting to do major operations which would tax the skill and knowledge of a Keen or a Mayo.

It is a burning shame which few men have the courage to condemn; it is increasing, and—as a terrible consequence—these ambitious amateur surgeons are performing many needless operations, for the prestige and the fee! Rather than sacrifice the money to a surgeon who will not "divide" they needlessly endanger the lives of their patients in the first instance, and make little less than criminal demands for their work in the second. There is no use trying to dodge the issue; these are facts, and they cannot be evaded.

The second effect has been to induce the average doctor to "hang on" to his chronic cases, such as gallstone, gastric ulcer, recurrent appendicitis, gonorrheal salpingitis, and even cancer of the uterus, to get as much money as possible out of them before turning the patients over to a specialist for long-needed operations. This is not criminal,

but it can hardly be said to be strictly ethical. He who would say it is better than taking the patients to operators who would divide the fee has a strange system of moral philosophy.

But the third result is the "corker." It is the source of revenue which so puzzles the anxious enquirer of the official journal of the state medical society. The member of the affiliated county society under no circumstances would take a patient to a city specialist who would divide a fee—oh no! That would be unprofessional, "un-ethical."

So what does this stickler for the proprieties do when he gets a surgical case which he dare not operate on himself? He tells the patient he will get a competent operator from the city to operate in the home, or more often the little local hospital poorly equipped and worse managed, for a good fat fee—usually \$300, and frequently far more. This he collects. Then he writes to two or three surgeons saying he has a patient in moderate circumstances who needs operation, and will the surgeon please come down and operate "as a special favor to him" for \$100 and expenses? And the surgeon, being an accommodating sort of fellow (one of the three written to is sure to be) readily drops into the little game and seldom dreams that he is being "flim-flammed."

Not a common thing? It is becoming as common as flowers in June. This sort of practice has spread from Augusta to Ysleta, from Atlanta to Yuba Dam. And the worst of it is that these very men are the ones who stand up in their local societies and most earnestly condemn the surgeon who advocates the rendering of a bill to the patient with the statement that it covers the fee both of operator and family doctor, because "division of the fee is unethical." Unethical indeed! It seems to depend, however, upon who does the dividing. And the funny part of the business is that the very men who have most bitterly condemned division of the fee, heretofore, are the very ones who have done most to build up this rather demoralizing practice and who are

now being made the victims of the very men who have been their staunchest supporters.

EMORY LANPHEAR.

St. Louis, Mo.

THE OLD TIN BUCKET

By T. C. Buxton, M. D.

With what anguish of mind I remember my childhood,
Recalled in the light of a knowledge since gained;
The malarious farm, the wet, fungus-grown wild-wood,
The chills then contracted that since have remained;
The scum-covered duck-pond, the pig-sty close by it,
The ditch where sour-smelling house drainage fell,
The damp, shaded dwelling, the foul barn-yard by it,
But worse than all else was that horrible well.
'Twas an old tin bucket,
The old battered bucket,
The rust-covered bucket
Which I drew from the well.

Just think of the germs, the vessel which lifted
The water I drank in the days called to mind,
E'er I knew what professors and scientists gifted
In the water of wells by analysis find;
The rotten wood fiber, the oxide of iron,
The algæ, the frog of unusual size,
The water impure as the verses of Byron,
Are things to remember with tears in my eyes.
'Twas an old tin bucket,
The old battered bucket,
The rust-covered bucket
Which I drew from the well.

And to tell the sad truth, though I shudder to think it,
I considered that water uncommonly clear,
And often at noon when I went there to drink it,
I enjoyed it as much as I now enjoy beer.
How ardent I seized it with hands that were grimy
And quick to the mud-covered bottom it fell,
Then with the nitrates and nitrites all slimy,
With matter organic it rose from the well.
'Twas an old tin bucket,
The old battered bucket,
The rust-covered bucket
Which I drew from the well.

Oh, had I but realized in time to avoid it
The dangers that lurk in the pestilent draft!
I have tested for fungi, and often destroyed them
With potassium permanganate, e'er I quaff;
Or perhaps I have boiled it, and afterwards strained it
Through filters of charcoal and gravel combined;
I often distilled it, condensed and regained it
In portable form with its filth left behind.
'Twas an old tin bucket,
The old battered bucket,
The rust-covered bucket
Which I drew from the well.

How little I knew of the dread typhoid fever
 That lurked in the water I ventured to drink;
 But since I became a devoted believer
 In teachings of science, I shudder to think;
 Though now far removed from the scenes I'm
 describing,
 I gag at the thought of that horrible well.
 'Twas an old tin bucket,
 The old battered bucket,
 The rust-covered bucket
 Which I drew from the well.

CHROMIUM SULPHATE IN ENLARGED PROSTATE

I would like to ask readers of *The Council* who have had any experience with the above remedy to report their success or failures with the same. I have been using the remedy less than a year, so it is comparatively new to me, yet in the prostatic troubles of old men I have had uniformly good results, and in some bad cases have been surprised as well as pleased at the benefits received in the short time of from one to two weeks, as the following case will show:

Mr. J. B. W., aged 73 years, applied to me for treatment after he had been the rounds. He was obliged to adopt the catheter-life for the past six months in order to obtain relief and to make life worth the living. Examination per rectum revealed a prostate as large as a walnut. The patient was constipated and discouraged. He was put on chromium sulphate, 4-grain tablets four times a day, after each meal and at bedtime, the medicine to be taken with a glassful of water.

Considerable relief was obtained after one week of the above treatment. The dose was now increased to 8 grains three times a day, omitting the dose at bedtime. Strychnine sulphate, gr. 1-130, before each meal was added to the treatment at this time. The improvement was rapid from that on. As a result the catheter was laid aside within a space of two weeks, much to the joy of the patient and my own satisfaction.

This patient took the remedy for three months. The strychnine sulphate was stopped at the end of the first month. Examination revealed a prostate of very nearly normal size, no tenderness, sleep undis-

turbed, he having to arise only once to urinate and that along toward morning. I will say, in conclusion, that I believe we have a remedy of great value in chromium sulphate in prostatic troubles. I have not had any experience with this promising remedy except as above.

As stated in the beginning of this paper, I should like others to report through the columns of *The Medical Council* their results with chromium sulphate.

S. J. Ross.

Schultz, W. Va.

[We reprint this brief report from *The Medical Council*, January, 1910.—ED.]

TO E. S. G.

ON READING "AFTER CONSULTING HOURS"

In the wetness of these showers in that land of
 bog and rain
 I've a hunch your teeth were snappin' louder than
 a coon's refrain.
 Yes, I'll bet you felt as rotten as my little revenue,
 Or the mem'ry of these castles that we built in '92—
 Built way back in '92,
 Where the old cadaver grew.
 Dost remember all the muscles that we learned
 in '92,
 When we told our lessons through,
 And so frequently we drew
 Thunder from Old Senn and others as they passed
 us in review,
 Back, way back in '92?

U-la-pal-a-ku-a—thunder! What's the use? I've
 got a twist
 In my masseteric muscle which has caused my face
 to list.
 Then, again, there's Kal-a-pele-pe—no, I didn't; I
 just thought
 'Twas as well to ease the center of my speech so
 overwrought.
 For I knew I hadn't ought
 To so easily be caught
 With the goods of other's markings that were
 never, never taught
 In Old Rush, in '92.

With your "Chinks," and Japs, and quicksand,
 what a dismal land you're in:
 Rain above and mud beneath you, ooze and slush
 that's mighty thin.
 Come you back, E. S., and harbor once again
 where ice and snow
 May upon your cheeks paint roses and relieve
 you of that woe
 That you shouldered long ago,
 Grap'ling with the leper's foe.

Ken you not the rush of footsteps and the sway-
ing to and fro
In Old Rush, in '92?

MOSES ST. PETER.

Dumont, Ia.

THE AMERICAN JOURNAL OF PHYSIO-
LOGIC THERAPEUTICS

This is the latest aspirant for journalistic favor in Chicago, and inasmuch as it is to be edited by our friend Dr. Henry R. Harrower, already well known to many readers of this journal, we can safely promise that it will be thoroughly alive, filled to overflowing with bright original ideas, strictly up to the second, eminently practical, and as breezy in editorial tone as the editor himself.

The first number will probably appear about May 1. It will be published bimonthly and the subscription price will be \$1.00 a year. Address The American Journal of Physiological Therapeutics, 72 Madison St., Chicago, Ill.

"OL' DOC LENT, AND OTHER POEMS"

Here is a book full of the kind of poetry that members of THE CLINIC "family" like. In other words the author is one of us. He writes of things with which we are acquainted and in which we are interested. His people are our people—we know them all—everyone of them, from "Ol' Doc" to "Uncle Hiram" or the "Editor of The Clarion." The same kindly touch and hearty human wit that makes us all love Riley breathes through everything Dr. Rose writes. Just to give a taste, here's "Ol' Doc Lent" himself:

OL' DOC LENT OF FROGMORE

They say that young Doc Morfoot is drivin' fit to bust;
An' Green, the homopathy, is raisin' quite a dust.
They're both of 'em nice fellers, so fur as I can see,
But ol' Doc Lent of Frogmore is good enough fer me.

I never could get used to these doctors nowadays,
With all their queer inventions an' their new-fangled ways.
Doc says he doesn't need 'em; he's practised forty years
Without no patent dingus a-stickin' in his ears!

When Doc Lent comes to see you, he just hauls up a chair,
An' feels your pulse a minute an' sets a-starin' there,
His black eyes borin' through you; there ain't a single thing
A-goin' on inside you that he don't see, by jing!

Some folks that's kind o' dainty, don't cotton to him much,
Because he smokes a corncob, an' chews to beat the Dutch,
An' don't use no palavar, ner wastes a lot o' breath—
When layin' out his program fer circumventin' death.

There was Dawrius Thompson, down on the Gordon swamp.
Malar'y an' chill-fever was meat an' drink to Tomp,
But when pneumony got him, he caved right in, an' soon
Was ravin' like all Bedlam, an' whoopin' like a loon.

They sent fer Green, who left him some little sugar pills,
That wouldn't feeze a chipmunk; an' then they sent fer Mills;
But Mills was drunk, as usual, an' got lost on the way,
So then they took on Morfoot, an' kept him half a day.

At last they had a glim'ring of sense at Gordon's swamp,
An' ol' Doc Lent of Frogmore was gi'n a whack at Tomp.
Doc didn't putter 'round none, ner hem, ner haw, ner doubt,
But put Tomp on lobely—an' let him sweat it out!

Now Tomp is well as ever, an' tickled half to death;
A-drawin' in malar'y again with joyful breath—
A livin' advertisement! An' folks can rip an' tear,
An' cuss Doc, if they want to, but he cured Tomp fer fair.

Doc ain't so awful pious—he swears like all pos-sest—
But there's a heart a-beatin' beneath his rusty vest.
An' I'll bet my suspenders that when his journey ends,
Saint Peter'll say, "Hello, Doc! Come in an meet your friends!"

That's only one of the fine things in the book. Of those in a more thoughtful vein I wish particularly to praise "The Microcosm," which is one of the finest poems I have read for many a day.

Every doctor should have the books written by doctors for doctors. If you haven't started such a library it is time that you did. Send to The Backbone Publishing Company, Ravenswood Station, Chi-

cago, for a copy of this book. Price in art cloth, \$1.00; in de luxe flexible leather, \$2.00.

CRACKS IN THE SKIN

Dr. Frank B. Kirby of Philadelphia says that he cured a case of painful "cracks" in the skin near the finger-nails and knuckles, so common during the winter months, by the administration of iron arsenate, gr. 1-67, three times daily. It was tried in this case only, and is offered to the "family" as a suggestion only, with the hope that others will try it out and report. Perhaps others will tell what they use for this troublesome condition. Who has the best idea for its treatment?

THE BACKBONE MONTHLY AGAIN

Have you subscribed yet for this little magazine? If you haven't done so, better send in your money now,—and not for yourself alone either. A dollar pays for three yearly subscriptions.

Here are some of the good things appearing in the current number:

"Work Out Your Think," by Snips.

"Pay Up—Keep Paid," by Chas. S. Moody.

"Waite and Eddy—Heroes of the Cherry Mine," by A. S. Burdick.

"The Deaf and Their Work-Problem," by Edward B. Nichie.

"Letters of a Baseball Fan to His Son," by S. D. Clough.

"Know Thyself," by W. T. Dowdall.

This is all good stuff, but we wish to call attention particularly to Mr. Nichie's article, which is an appeal for greater interest in the problems of the deaf, and that of Dr. Moody, which is a witty exposé of the dead-beat—the man who could pay the doctor if he would, but won't. This should be in the hands of every one of your patients.

There are also some fine original poems. For instance, Charles Eugene Banks writes on "Who Is My Brother?" Homer Clark Bennett on "Be a Booster," Walt Mason on "Bwana Tumbo," Robert Stephens on "Stand Up Right," L. W. Zochert on "The

Power of Joy," etc. In the editorial department we talk about "The Other Fellow," "Reformed Millionaires," "Here's to Teddy," "The Bravest Thing I Ever Saw," etc.

While *The Backbone Monthly* is small it is a compressed tablet of palatable nerve—and you can use it in your business.

Address The Backbone Publishing Company, Ravenswood Station, Chicago.

How many?

SCIATICA: HOW TO TREAT IT

In a recent number of *CLINICAL MEDICINE* you ask for some "bulls-eyes." Here are a few from my experience.

Sciatica can be cured by giving sodium salicylate and acetanilid in doses sufficiently large and frequent to control the pain and fever. Codeine, or hyoscine, morphine and cactin may be added to the first few doses if the pain is very severe. No external applications are necessary, but to keep the friends busy, something may be done in this line. As soon as the pain ceases the patient is satisfied and so are the friends.

"Clean out, clean up and keep clean" is always in order. In all cases this has reference to the inside of the patient, as this is where the trouble lies. It's all right to keep the outside and surroundings clean, but the patient is sick on the inside, remember this. Then there are two things that can't stay in the same hide at the same time, and that is sciatica and acetanilid with sodium salicylate, when the latter is given in the proper doses and often enough. I hear the objection, "You will run his heart." In twenty-five years of practice and in many hundred cases treated, and all in practically the same manner, all have got well in from two to ten days; and by well I mean *well*—not partially cured.

I am just as successful with my typhoid cases. I cure them all, whether you believe this or not. I do the trick and do it every time. I have just dismissed two cases, cured. Many typhoid patients about town are dying, but not my cases. This may be too positive for a medical journal to give to its readers, as the doubting Thomases are

abroad in the land, but it's the truth all the same.

M. E. JOHNSON.

Pittsburg, Kan.

[Twenty-five years of practice and many hundred cases of sciatica successfully treated form a good record, Doctor; but it strikes us that you could get the same results if you omitted the acetanilid. You have been singularly fortunate—and skilful—in your typhoid-fever-cases.—ED.]

THE TREATMENT OF FRACTURE OF THE PATELLA

In the August, 1909, number of *Surgery, Gynecology and Obstetrics*, Dr. Aimé Paul Heineck tabulates and analyzes 1100 cases of fracture of the patella treated by the open method. He prefers open operation, in this condition, to the subcutaneous methods, and advises its adoption, because the subcutaneous and percutaneous methods do not enable the surgeon to coapt accurately the fractured fragments, nor to freshen the fractured surfaces; they do not insure against faulty union, do not permit the cleansing of the synovial cavity, nor the repair of tears on the capsule and of lacerations in the aponeurotic expansions of the vasti. Finally, the subcutaneous and percutaneous methods, while creating openings for infection, do not permit proper drainage.

By the open method an osseous union may be obtained, which is hardly ever the case in nonoperative treatment. The functional recovery is more rapid and also more certain because the open method permits the removal of everything that might delay or prevent an osseous union.

The open method is not indicated, or is contraindicated in persons afflicted with diabetes, advanced tuberculosis, well-defined renal, cardiac, hepatic, or malignant neoplastic diseases; in closed longitudinal fractures with no or only slight lateral displacement, in subaponeurotic or incomplete fractures, in fractures with only slight separation of the parts.

The advantages of the open method in cases not covered by the contraindications are demonstrated at length in the paper, to which we must refer those especially interested. There they will also find detailed indications for the treatment and other particulars which cannot be included in a short abstract.

It has been the author's practice, in the management of fresh subcutaneous fractures of the patella, to defer operation for from three to five days after the injury, being guided somewhat by the patient's general condition and also by the evidences of local trauma. The congestion and inflammatory exudate consecutive to the injury have usually, by this time, begun to retrogress.

TREATING COLDS, COUGH AND GRIP

Your request for something "containing only alkaloids of thought" upon the subject of winter coughs, colds, grip, etc., covers quite a subject—and haven't you asked for something that requires the best that a fellow is able to dig up? Acute coryza, grip, winter coughs and colds are very prevalent in this section of the country during the winter months and seem to resist treatment with a persistency that is out of all proportion to their severity.

During the premonitory stages of an acute coryza I have found that the frequent inhalation of the vapor of a 40-percent solution of formalin (a few ounces being carried in the pocket) tends to lessen the congestion and relieve the "stuffy, stopped-up feeling" of the nasal passages, producing, of course, quite a free discharge of mucus. By way of treatment I give, at the same time, broken doses of calomel and podophyllin hourly, followed by laxative salines to move the bowels freely. Then the patient receives quinine in 2- or 3-grain doses every two or three hours, together with atropine and aconitine, adding small doses of codeine or morphine if desirable to relieve excessive cough. The atropine and aconitine are to be given hourly for four or five hours, then every three or four hours. Should the ton-

sils become swollen, congested and painful, ice-water gargles usually relieve this condition. Gargles or sprays containing thymol, menthol, eucalyptol, camphor, myrrh, etc., singly or in combination, may be used to advantage. Alkaline nasal douches or sprays (with a little glycerin) frequently relieve the unpleasant sensation in the nasal passages.

Grip in this section of the country is usually complicated by malaria, or maybe it is malaria complicated by the grip; anyway, we have both the malaria and grip to treat in the same patient and at the same time. Free purgation with calomel and podophyllin followed by saline laxatives is very important. Further treatment consists of quinine in goodly doses (from 5 to 6 grains every two hours) and aspirin with heroin or codeine to relieve the headache and the other pains. Aconitine, digitalin and strychnine arsenate are given hourly to reduce the temperature if very high; strychnine, atropine and digitalin if cardiac distress is present. Alcoholic stimulation in small quantities undoubtedly does good, especially in the old. Rest [in bed is, of course, imperative.

Convalescence from grip usually is prolonged; no doubt owing to the malarial element; iron, quinine, arsenic, nuclein, strychnine, nourishing food, keeping the bowels active by occasional doses of calomel and podophyllin and laxative salines, the sulphocarbolates for intestinal antiseptics seem to give the best results during this stage of the disease. A torpid liver and enlarged and tender spleen are met with in ninety percent of the cases of whatever character, and frequently it not only requires one but several "shots at the liver" with calomel and podophyllin to get the desired results. Inunctions of mercurial ointment over the enlarged and tender liver and spleen work wonders in some cases, while doing good in all of them. The intense headache, backache, and the other pains yield best to aspirin in 5- to 15-grain doses, usually combined with heroin or codeine. The depressing after-effects following acetanilid and phenacetin are not noticed when aspirin is used. The hacking

cough frequently met with in convalescence from grip is best treated with some form of iodine, such as calcium iodide or syrup of hydriodic acid. Emetin, atropine and cicutine, sometimes combined with hyoscyamine or morphine, in combinations and proportioned according to indications of each individual case, will do good.

R. K. OGILVIE.

Blodgett, Mo.

[Dr. Ogilvie might have talked longer, but he could not have said more than he has said in these splendidly written few paragraphs. He seems to have covered the field as thoroughly as could be done, briefly and concisely. Thank you, doctor, that is the kind of paper that counts and helps. Come again.—ED.]

TO CHECK THE SECRETION OF MILK

According to recent studies at the Johns Hopkins Hospital the secretion of milk may be checked by the administration of 20 grains of potassium acetate, in water, three times daily. Since this treatment was introduced there have been no abscesses of the breast at the Baltimore institution. The method was suggested by Lewis of Westerly, Rhode Island, who has used it for twenty years.

NUCLEIN IN RHEUMATISM

Dr. F. E. Hufnail of Minneapolis, Minnesota, writes that he uses nuclein in all his cases of acute articular rheumatism. It is given in good-sized doses, every three hours—four times during the first day. The following day he gives aspirin, 15 grains after meals and at bedtime, following each dose with a full glass of water. Thus he alternates the nuclein and the aspirin from day to day, of course thoroughly cleaning the bowels. Cold is applied to the swollen joints, using flannel cloths wrung out of ice-water. In four days the patients are able to sit up. The doctor has used both nuclein and protonuclein, but prefers the former.

Esperanto for Physicians

PASSIVE VOICE

In like manner the passive voice is formed by the use of the verb *esti* followed by the passive participles.

Present

<i>Mi, ci (vi) li</i>	} <i>estas</i> am, art, are	{ <i>ŝrapata</i> , being struck <i>ŝrapita</i> , having been struck (i. e., have been struck) <i>ŝrapota</i> , about to be struck
<i>ŝi, ĝi, oni</i>		
<i>ni, vi, ili</i>		

Past

<i>Mi, ci (or vi)</i>	} <i>estis</i> was, wert, were	{ <i>ŝrapata</i> , being struck <i>ŝrapita</i> , having been struck (i. e., had been struck) <i>ŝrapota</i> , about to be struck
<i>Li, ŝi, ĝi, oni</i>		
<i>Ni, vi, ili</i>		

Future

<i>Mi, ci (or vi)</i>	} <i>estos</i> shall, shalt, will, wilt be	{ <i>ŝrapata</i> , being struck <i>ŝrapita</i> , having been struck (i. e., shall or will have been struck) <i>ŝrapota</i> , about to be struck
<i>Li, ŝi, ĝi, oni</i>		
<i>Ni, Vi, ili</i>		

Conditional

<i>(Le), Mi, ci (or vi)</i>	} <i>estus</i> should or would be	{ <i>ŝrapata</i> , being struck <i>ŝrapita</i> , having been struck (i. e., had been struck) <i>ŝrapota</i> , about to be struck
<i>Li, ŝi, ĝi, or oni</i>		
<i>Ni, vi, ili</i>		

The agent in a passive sentence in Esperanto is expressed by *de*, the instrument by *per*. Thus: *La operacio estas ŝarita dela ĥirurgiisto per malmultaj iloj*, "The operation was performed by the physician with (through) few instruments." This construction is, of course, excellent English, though somewhat archaic—"He was loved of God and man."

Other Uses of the Participles

As before stated, the participles, both active and passive, can be used as nouns by substituting the nominal terminal *o* for the adjectival *a*. This makes possible a fine distinction that in most languages has to be expressed by a periphrase. At a public meeting, for instance, "the speaker" may

refer to the person speaking, to one who has spoken, or to the one about to speak, and we have to qualify the word accordingly to make it clear to which speaker we refer. But in Esperanto *la parolanto* is the speaker now speaking; *la parolinto*, the speaker who has already spoken, while *la parolonto* is the speaker about to speak. Similarly, in the passive voice, *la sendato* signifies the present messenger (person being sent); *la sendito*, the one who was formerly sent; *la sendoto*, the one about to be sent.

This is perhaps the place to note a fine distinction between the adjectival participle and the adjective formed directly from a root. In general terms the participle may be said to refer to an action, whereas the

direct adjective refers to an inherent quality. For example, *ĉarmi* is "to charm." From this we get the adjective *ĉarma* and the participle *ĉarmanta*, both corresponding to the English word "charming." Yet their significance is not identical. When we say "She is a charming woman," we refer to a permanent inherent quality, and the proper rendering would be *Ŝi estas ĉarma virino*. In the sentence, however, "She is charming her guests with her singing," the reference is to a temporary action, and we should say, "*Ŝi estas ĉarmanta siajn gastojn per sia kantado*. Indeed, it would be better to say in this sense, *Ŝi nune ĉarmas siajn gastojn per sia kantado*. It is necessary to add some word like *nune*, "at present" to show that a specific action is meant; otherwise the significance might be, "she charms her guests when (ever) she sings."

We must also be careful in the translation of the English present participle used to signify a permanent quality, state, or occupation. Thus, take the three following phrases: "I saw the working man in the field," "I saw the man working in the field"—the last in its two possible meanings, viz.: "I saw the man who was working in the field," and "I saw that the man was working in the field." In Esperanto these differences are very clearly marked. In the first, we do not use the participle at all, but the termination signifying occupation: *Mi vidis la laboriston en la kampo*. In the second, the participle is attributive; and therefore agrees with its substantive in case: *Mi vidis la viron laborantan en la kampo*. In the third the participle is predicative, and is therefore in the nominative case: *Mi vidis la viron laboranta en la kampo*.

Finally we must point out the *adverbial use of the participle*. Thus, in the English sentence, "(while) going along the street I met the ambulance," "going along the street" refers to the subject of the sentence, I, and we therefore use the adverbial form of the participle from *lau-iri*, to go along, viz., *laurante*: *Laurante la straton mi vidis la ambulancon*. In English there may be some uncertainty whether it was I or the ambulance that was going along the street.

In Esperanto no such confusion could occur, for in the latter case the adjectival participle would be used: *Laurantan la straton mi vidis la ambulancon*, or better, *mi vidis la ambulancon laurantan la straton*. The practice of inverting the order of words in English is of doubtful value and is apt to give rise to great ambiguity.

In English, moreover, we often have participial expressions introduced by the prepositions "by," "through," "in." Such participial expressions as, "By reading we learn," "Through having suffered we have become careful," "In operating we must exercise caution," are rendered in Esperanto by the adverbial form of the participle without any preposition; thus: *legante, ni lernas; suferinte, ni estas fariĝinta zorgemaj; operaciante, ni devas ekzerci singardemon*. This form, however, can be used only in reference to the subject of the main sentence. For instance, in the sentence, "The surgeon having operated, the attendants removed the patient," we cannot rightly say, *la ĥirurgiisto operaciinte, la malsanulistoj forportis la malsanulon*, because "having operated" refers, not to the attendants, the subject of the main sentence, but to someone else. Here we must say, *post kiam la ĥirurgiisto operaciis, la malsanulistoj, etc.*, i. e., "after (when) the surgeon had operated, the attendants, etc." On the other hand, we can say: *operaciinte, la ĥirurgiisto foriris*, "having operated, the surgeon went away," because here the participle does refer to the subject of the main statement, viz., the surgeon.

The adverbial form of the participle is used also when the sentence is impersonal, i. e., when there is no noun or pronoun for the subject of the sentence with which a participial adjective could agree in number and case. Thus: *Estas pluvante*, it is raining; *per la eksperimentoj de Plaut estas pruvite ke la kobravenend reakcio laŭ Much kaj Holzmänn por diagnozaj celoj en psikiatro ne taŭgas*—"By the experiments of Plaut it has been proved (is having been proved) that the cobra venom reaction of (according to) Much and Holzmänn for diagnostic purposes in psychiatry, is not suitable."



CLINICAL · MEDICINE POST-GRADUATE · SCHOOL *of* THERAPEUTICS

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PART III.—LESSON SEVEN

BRONCHITIS

THE ETIOLOGY OF BRONCHITIS

Acute bronchitis is probably the most frequent disease noted by the practitioner, averaging approximately ten to fifteen percent of all diseases. It is more frequent in cold, dusty and variable weather; and seventy-five percent of all cases occur in the months of December and April. While it is frequently a primary infection, it is also often secondary to, or a complication of measles, influenza, whooping-cough, typhoid fever, scarlet-fever, diphtheria, syphilis, tuberculosis, sepsis, etc.

The Cause of Bronchitis.—Various organisms cause this disease. Fifty-nine percent of all cases are due to the micrococcus catarrhalis. Next in frequency are found pneumococci, influenza bacilli, staphylococci, pneumobacilli of Friedlaender, and occasionally streptococci. The majority of cases show a mixed infection of one or more of the above organisms.

Predisposing causes are toxic effects of drugs, such as potassium iodide, mercury, tobacco, alcohol, etc.; mechanical irritation by dust, wool, stone, etc., in special trades, and also the excessive use of the voice, noted in public speakers. Bronchitis also very frequently appears as a complication

in constitutional diseases, such as obesity, nephritis, gout, and in the cachectic conditions produced by diabetes, cancer and syphilis. It is further very frequent in persons suffering from venous stasis due to a mitral lesion. The disease is comparatively more frequent during the period of one-half to three years of age and also in the very old.

A chronic form of the disease is known as the "winter cough of the aged," and it occurs in practically all cases in which the patient has a chronic nephritis. This chronic nephritis must always be considered, as treatment directed to the relief of the bronchitis alone in these cases is usually of no avail.

Appearance of the Sputum.—The sputum at first is slight in amount, difficult to raise and usually very viscid. Later the amount increases slightly, it becomes less viscid, transparent, and consists essentially of mucin, with a few leukocytes. Frequently there are considerable numbers of lymphocytes present, although the majority of leukocytes are neutrophils. Occasionally a considerable percentage of eosinophiles are found. The sputum then further increases in amount and becomes mucopurulent, containing many more bacteria,

an increased number of pus-corpuscles and eosinophiles, with many degenerated epithelial cells. There are always present a considerable number of Dittrich's plugs. These are mucotic plugs containing many staphylococci and streptococci or various other organisms that are causing the particular infection at hand. The predominating organisms, according to Ritchie (*Journal of Pathology and Bacteriology*, Vol. VII, Dec., 1900) are pneumococci and streptococci. In some cases the predominating organisms are influenza bacilli. These are very frequently associated symbiotically with the micrococcus catarrhalis (C. Lord, *Boston Medical and Surgical Journal*, Dec. 8, 1902).

The examination of the sputum is essential, first in order to determine the specific organism, as of necessity a different line of treatment must be pursued in an influenzal bronchitis than in a staphylococcus bronchitis. Often an examination of the sputum is necessary to differentiate other similar pulmonary conditions from bronchitis. A brief review of the findings in these follows.

Differential Diagnosis.—*Putrid Bronchitis.* The sputum in this condition is very fetid; it contains many Dittrich's plugs but no fat-crystals, elastic fibers or pulmonary tissue. In *pulmonary abscess* there are many elastic fibers and pus-corpuscles. Fatty crystals are usually found in sheaths, and hematoidin crystals are common. There are no bronchial plugs, and the foul odor is usually absent. In *pulmonary gangrene*, the sputum is voided periodically, large amounts at one time. It is alkaline in reaction and very offensive. Upon standing it separates into three layers, the foam, a greenish or gray serum, and a greenish to brown sediment. This sediment consists of lung-tissue, Dittrich's plugs, long fat-needles, blood-pigment, pus, blood, triple phosphates, and many bacteria.

The differentiation between pulmonary tuberculosis and bronchitis is often aided by an examination of the sputum. In tuberculosis we have the characteristic tubercle bacilli, and most of the leukocytes are lymphocytes. There are no eosinophiles present. Sometimes in bronchitis acid-fast

bacteria, resembling tubercle bacilli, are found. These organisms, however, are much narrower than tubercle bacilli and have sharply pointed ends. At times an inoculation experiment is required in order to determine with certainty the presence of tubercle bacilli.

The blood findings, except in cases of influenzal bronchitis, are those of a secondary anemia, i. e., a reduction in the number of red blood-corpuscles, with a corresponding decrease in the amount of hemoglobin, and an inflammatory leukocytosis, an increase in the total number of leukocytes and an increase in the percentage of neutrophils. In influenzal bronchitis, that is, if the predominating organisms are influenza bacilli, there is a greater anemia and practically no leukocytosis.

J. FAVIL BIEHN.

Chicago, Ill.

TREATMENT OF ACUTE BRONCHITIS

Prophylaxis.—The removal of hypertrophies, adenoid tissue, etc., and the correction of deformities of the upper air-passages are important prophylactic measures. Persons should become accustomed to daily cold sponging or bathing; they should not dress too warmly—too much "bundling up," especially about the chest and throat, is unwise and renders a person more susceptible to colds. The temperature of the living room should vary but little from 65° F.; the sleeping room should be cold; both rooms should be well ventilated. Pure fresh air is essential to health. Uricemics, cachectics, and persons addicted to immoderate use of beverages are especially subject to bronchitis and other respiratory catarrhs. Ice-water-fiends are especially liable, as their constant perspiration renders them susceptible to every draft.

Abortive Treatment.—Many times an attack of acute bronchitis can be aborted within the first twenty-four hours. If the patient is seen upon the onset of the first signs of bronchial catarrh, treatment should be immediately instituted with a view to aborting the disease. A full dose of saline

laxative should be administered and repeated in two or three hours if the first dose fails to move the bowels freely. The patient should take a general hot bath of 100° to 105° F. and go to bed as soon as the bath is over; a glass of hot lemonade should be drunk, and the patient covered with woolen blankets with a view to promoting diaphoresis. The room should be equably heated and the air kept moist by water continually evaporating in it. Internally the patient should be given one of the following:

1. Aconitine (amorphous), gr. 1-134; atropine, gr. 1-500; morphine, gr. 1-67; given together and repeated every twenty or thirty minutes until the physiologic effect of the aconitine or of atropine is felt, when the interval between the doses should be extended to one or two hours, the object being to keep up the effect attained, but not to exceed it. This line of treatment is of value in overcoming the acute coryza and checking the free, watery, acrid discharge from the nose. If, in the judgment of the physician the patient is suffering from acidemia or uricacidemia, then this combination of aconitine, atropine and morphine should not be given, but the following administered instead:

2. Atropine sulphate, gr. 1-500; quinine sulphate, gr. 1-6; camphor, gr. 1-6, taken together every fifteen or twenty minutes until the effect of the atropine is slightly felt, then less frequently, so as to maintain the effect, but not to exceed a slight dryness of the mouth. In addition to this, the patient should take a teaspoonful of sodium bicarbonate in half a glass of water every three or four hours, to overcome the acidemia and to render the blood more alkaline. Free elimination should be brought about by way of the bowels, skin and kidneys.

If the hot bath, hot drinks and warm covering do not promote sweating, pilocarpine, gr. 1-67, may be given every five or ten minutes until sweating or salivation begins, when it may be discontinued, for the sweat-glands once stimulated by pilocarpine will continue to act under the influence of external heat and warm drinks without the further administration of the drug.

One of the two lines of treatment above described will be found efficacious in an ordinary case of acute bronchitis with acute coryza, in which the trouble seems to be localized in the nose, throat and upper bronchial tubes. Cases in which is shown more constitutional disturbance, such as chills or marked chilliness; muscle pains; fever of one, two or three degrees; small, rapid pulse with high arterial tension; dry, painful, paroxysmal cough, etc., require a different treatment at the onset of the attack, namely:

The thorough emptying of the bowels with saline laxative, as also the hot bath and hot drinks are as necessary here as in the first variety. The patient should be put to bed, and sweating promoted if possible. Internally, in sthenic cases, aconitine (amorphous), gr. 1-134, digitalin, gr. 1-67, and veratrine, gr. 1-134, should be given, together, dissolved in half to one ounce of hot water, and repeated every fifteen or twenty minutes to effect, that is, until the fever is lowered, the pulse becomes softer and slower, and the skin is moist, when the medicine may be given every hour or two or often enough only to maintain the effect.

In all cases that are not distinctly sthenic or plethoric the "dosimetric triad," i. e., aconitine (amorphous), gr. 1-134, digitalin, gr. 1-67, and strychnine arsenate, gr. 1-134, should be given every half hour to one or two hours as required.

In the majority of cases the measures above outlined will abort the attack, but they will leave the patient relaxed and in a favorable condition to contract a fresh cold. If it be necessary for the patient to leave the house while this general relaxation is still on, tonics, such as brucine, gr. 1-67, or strychnine, gr. 1-67, with quinine, grs. 1 or 2, should be given every hour or two until the tonic influence is manifest, then just sufficiently often to sustain the tone for several days, maintaining restriction of the quantity of food and drink.

If these measures do not break up the attack, or if the patient is not seen until too late to abort it, much can be done to hasten it through its various stages and to make the

patient more comfortable. The dry, inflamed mucosa can be greatly relieved by bringing about an outpouring of secretion from the bronchi, thus hastening the development of the second stage.

To promote mucous secretion we must rely upon certain internal remedies, inhalations and external applications. For internal use there are at command four excellent remedies, to wit, apomorphine, lobelin, emetin and alkalis.

Apomorphine is the most speedy and powerful in its action and suitable for severe attacks affecting robust individuals. The dose is 1-67 grain every fifteen or twenty minutes till faint nausea is experienced, then less frequently. Lobelin is a powerful stimulant to secretion, better suited to croupy and dyspneal forms. It can be given in dosage of 1-67 grain to effect. Emetin is applicable to children and weakly patients, where the more powerfully depressing remedies might be dangerous if given recklessly. The doses and administration of emetin are the same as those of apomorphine and lobelin. Whichever drug is used, it should be continued until the mucous secretion is loose, thin and yellow.

Along with one of the remedies named either citrate, acetate or carbonate of potassium or of sodium, in doses of 10 to 30 grains, should be given. A dose of one of these alkaline salts should be given in milk or plain or mineral water every four or five hours.

The inhalations of a 2- or 3-percent solution of sodium bicarbonate or of physiologic salt solution through a steam inhaler are very beneficial. If an inhaler is not available, the patient may hold his head, covered with a cloth, over a dish of boiling water to which may be added balsam of tolu or of Peru or tincture of benzoin (one dram to one pint).

The bronchitis-tent serves a useful purpose for children. It can be made by hanging over the bed sheets supported by a rack or by a screen. Underneath the sheet there is kept boiling, by means of an alcohol lamp, a pan or kettle of water, thus saturating with moisture the air which the child breathes.

Some aromatic, such as tincture of benzoin, eucalyptol, balsam of Peru, etc., may be used in the water if thought advisable. Mild counterirritation to the chest is of value in this stage, and the practitioner may choose between a mustard plaster, iodine and camphorated oil, ammonia liniment, dry-cupping or the cold compress. Each has its advocates and each is of value. Cold compresses are highly prized by some practitioners, but personally I do not employ them in plethoric uricemia persons who catch cold easily.

The cold compress is applied in the following manner: A linen bandage about three yards long and six inches wide is dipped into water of room temperature and thoroughly wrung out. One end of the binder is applied to the right axilla, the binder carried across the chest to the left shoulder, across the back to the right axilla, across the chest to the left axilla, across the back to the right shoulder, and then to the middle of the chest. A second cross-bandage of dry flannel is then applied over the first one and the dressing left in place until it is dry, which usually requires four or five hours. A second wet-pack may then be applied or the skin may be washed with alcohol and rubbed dry. It is unnecessary to apply an impermeable oilsilk or rubber dressing over the wet bandage; if the binder is to be left on all night, the patient may wear a woolen shirt rather than a flannel bandage over the cross bandage.

The early cough of acute bronchitis may be greatly relieved by one or the other of the following "cough" combinations:

Morphine sulphate	gr.	1-100
Tartar emetic	gr.	1-100
Emetin	gr.	1-500
Pilocarpine nitrate	gr.	1-250

One or two such doses may be given every half to one hour until effect.

Codeine sulphate	gr.	1-67
Emetin	gr.	1-67
Aconitine, amorphous	...gr.	1-500
Hyoscyamine, amorphous	gr.	1-1000

Of these one dose may be given every half to two hours, dissolved in 1-2 to 1 ounce of water, and pushed to effect. If

dryness of the mouth or throat manifests itself, the remedy should be suspended. If the cough tends to become dry, with scanty secretions, it may require apomorphine, lobelin or emetin. If there is much dyspnea with irritative cough, 1-500 grain of atropine and the same amount of glonoin may be given every thirty to sixty minutes until effect is manifested. Strychnine, gr. 1-30, every two to four hours, increases the tonicity and resistance of the bronchial tissues, causing contraction both of the bronchial musculature and the large respiratory muscles, thus tending to expell the tough, viscid mucus and to overcome the morning and nocturnal dyspnea. A full dose of strychnine taken at bedtime often will prevent attacks of dyspnea during the night. Aspidospermine is another remedy of value in dyspnea. It may be given in doses of 1-12 grain every thirty minutes until effect.

As the attack progresses it may run into bronchorrhea, with free serous secretions. Here oil of turpentine, terpin hydrate, terpinol, tar, balsams of Peru and of tolu, cubebs, volatile oil of copaiba, sodium benzoate, guaiacol benzoate, iodized calcium, creosote, eucalyptol, ammonium chloride or carbonate, and so forth, will prove of great benefit.

In elderly patients the sensibility of the respiratory mucosa is slight, the tissues are relaxed, and the impulse to cough is not felt. Secretions collect in the bronchi until the patient is literally drowning in his own secretions. The remedy is an emetic of seidlitz powder, the acid solution being first swallowed and then the other, which will empty the stomach more quickly than any other emetic and without nausea or depression. Follow with sanguinarine nitrate, gr. 1-67 every half to two hours, which will stimulate sensation and make the patient cough harder.

Infants with bronchitis also have little sensibility in the mucous membrane and care must be taken that the secretion is raised. Somnolence, blueness about the lips, pallor, shallow respiration with little or no cough, should excite uneasiness, but

are apt to be overlooked by an inexperienced mother. An emetic will rid the chest of mucus, but it further lowers the vitality. Sanguinarine in doses appropriate to the age is of value, also strychnine pushed to the physiologic limit. Place the babe in a hot bath and dash a little cold water on the chest to excite crying and full respiration. If emetics are given, it should be only at night, so that the respiratory tract may be freed from mucus before the parents settle for sleep. Opiates should rarely be administered to infants and never when subject to bronchitis.

Convalescence.—During convalescence the patient may need cardiac, respiratory, hematic and general tonics, such as digitalin, strychnine, atropine, arsenic, iron, etc. One of the best general tonics to give during convalescence from acute bronchitis is the triple arsenates of iron, quinine and strychnine with nuclein.

During the first stage of the disease the diet should be liquid and taken hot. Later solid food may be given.

Free elimination by the bowels, kidneys, and skin should be maintained throughout the whole course of the disease.

GEORGE F. BUTLER.

Chicago, Ill.

CHRONIC BRONCHITIS

Many years ago, when cimicifuga was urged as a "cure for consumption," Stillé said that the cases it cured were probably chronic bronchitis. We should be glad to find a cure for chronic bronchitis. Usually it is not cured, but recurs each succeeding winter earlier, stays later each spring and tends to become continuous throughout the year.

The climatic and hygienic treatment is the same as with tuberculosis—the climate that allows the patient to be most hours in the open air and affords most sunlight is the best. Windy localities are to be avoided. Wool next the skin has always been recommended, as best protecting the wearer against changes in temperature and accidental dampness.

We will assume that every point of domestic and personal hygiene has been regulated, and the patient eats, drinks, exercises, rests, according to the scheme carefully laid down by his physician. The factor of fecal toxemia has been eliminated by emptying the bowels, disinfecting them and keeping them clear and clean.

Anemia, scrofula, and other general dyscrasias have been detected and remedied. The elimination by liver, kidneys and skin has been tested and brought up to the standard. Digestion and malnutrition are maintained close to the normal point. We have remaining the pulmonary problem.

We have two principal forms—dry bronchial catarrh and bronchorrhea.

In the Dry Form the cough is excessive and harrassing. This may be moderated by small doses of emetine, 1-250 grain of the *pure alkaloid*, given every hour as long as nausea is not induced. This incites the secretion of normal respiratory mucus and allays the irritation. To this we may add zinc cyanide, one milligram with each dose, or iodoform, same dose; or cicutine hydrobromide if there is thoracic pain or pronounced reflex irritability. If any opiate must be employed, let it be narceine, a milligram allowed to dissolve on the tongue. The inhalation of steam, or the atomizing of menthol in fluid petrolatum, or of thymol iodide in this solvent, is useful as a palliative and as a means of checking the morbid processes and setting up those that tend to cure. Counterirritation over the pneumogastric nerve in the neck also aids in allaying irritability.

Sometimes the spasmodic element is marked, and lobelin well replaces emetine, while gelseminine may be required during the evening to procure sleep. Give a milligram every half hour until "dose enough."

Subacute Attacks, with dry, hot, swollen mucosa, call for veratrine or antimony arsenate, one milligram of either every half hour till effect. But if taken in their incipency, a grain of calcein every ten minutes for an hour usually will dissipate the attack,

Acute Febrile Intercurrents respond promptly to a centigram of pilocarpine hypodermically, aided by a hot mustard foot-bath and a brisk cathartic, a centigram each of calomel and jalapin every one-half hour for six doses, followed by a full dose of saline laxative. The cough is always eased by charging the air of the sick-room with steam. There is little to be gained by medicating it, although many patients like the addition of vinegar.

In Bronchorrhea we have a profuse discharge of mucus—serous, gelatinous or purulent. Saturation with calcium sulphide stops the formation of pus. Atropine checks serous discharge speedily; and a gram of calcium lactophosphate daily, in divided doses, restores the relaxed and fragile cell-walls to such condition as enables them to retain the serum. This is especially valuable in colliquative forms. The gelatinous discharge is harder to control. All forms are restrained by the use of iron, myrrh, oil of cinnamon, and especially by copaiba. The latter is best employed in very small doses so as to avoid irritation of the stomach. Too large doses stop the discharge, leaving the mucosa tumefied and dry, and the patient feels easy only when the effect passes off and the discharge reappears. Sprays of oil of cinnamon in any bland vehicle are useful. Strychnine arsenate or ergotin in full doses check the discharge temporarily.

Offensive Sputum.—When the sputa become offensive we have need of creosote, phenol or oil of turpentine, by the stomach and in sprays. The latter should be used very frequently, especially if gangrene is apprehended. Zinc phosphide is then required to incite vitality, a centigram before meals.

So great is the malefic influence of fecal toxemia that many patients drop all other treatment and settle down to a daily cathartic as their only resource.

Since the continuance of the morbid process indicates the failure of the affected tissues to throw off the disease and institute repair, it is wise to stimulate the vitality of the cells by small doses of sanguinarine, a milligram seven times a day.

Catarrhs of the Mucosas.—Several remedies are believed to exert a favorable influence over the mucous structures specifically, aiding them to throw off disease and assume normal functionation. Rhus toxicodendron and arbutin are especially effective in disease of the genitourinary mucosa and have some efficacy in the bronchial catarrhs. They should be given in small doses and for prolonged periods.

In this as in all chronic catarrhal maladies, success lies in a comprehension of the main factors of the malady, in the judicious selection of remedies, and in persistence in the treatment, while employing to the full extent the hygienic accessories.

WILLIAM F. WAUGH.

Chicago, Ill.

PHYSIOTHERAPY IN THE TREATMENT OF BRONCHITIS

Etiology.—Acute bronchitis, according to Malsbary, is, in the vast majority of cases, due to infection, either directly through the invasion of the bronchial mucous membrane by microorganisms, or indirectly through the elimination of toxins, as may be observed especially in typhoid fever and in cerebrospinal meningitis. It is sometimes due to the elimination of poisons like alcohol and iodine, and accompanies many of the exanthemata; sometimes it is due to extension of an inflammation from the upper air-passages, and finally it may be produced by trauma.

Chronic bronchitis may evolve from the acute form of the disease. It is found in tuberculosis, emphysema, asthma, disease of the heart, gout, rheumatism, diabetes, alcoholism. It may also be due to the irritating action of dust, etc.

Therapy of Acute Bronchitis.—The therapeutic measures which we discussed in connection with pneumonia (CLINICAL MEDICINE for March, 1910, p. 351), especially the first stage of the latter, are applicable in the treatment of bronchitis, particularly at the outset of the disease when a jugulation of the attack is possible in not a few instances. Forcible elimination through the

skin is desirable at the very inception of the attack. Any of the technical resources which are ordinarily employed to bring about a general increased activity of the body-surface (hot foot-bath, followed by a stimulating hot drink, a general cold moist-pack, a general hot immersion, a general hot-pack, dry or moist, the dry-heat cylinder, electric light or simply superheated air) may be employed for this purpose. The technical part of this eliminating procedure we have repeatedly discussed. After general elimination through the skin has been effected, derivation to the lower extremities, as repeatedly discussed on previous occasions, should be brought about in the usual manner. (See last lesson.) The inhalation of warm steam is useful in allaying and loosening a tight and tenacious cough. If the local symptoms are unusually severe, the application of the chest-compress (Priessnitz' pack to the thorax) answers an admirable purpose. The hygienic and dietetic regime in these cases does not differ from that ordinarily enforced in, and exhaustively discussed under, the head of "pneumonia."

Treatment of Chronic Bronchitis.

The treatment is largely and primarily influenced by the underlying cause of the catarrhal condition. Physicians are apt to overlook some very common etiologic factors in these cases. If the skin-function of the patient is insufficient, as indicated by a dry or even cold skin, the chronic bronchial catarrh is in all probability the result of a toxemia. Open the skin by suitable means and keep it active. Inhalation of pure air is a necessary condition of successful treatment. In many cases breathing exercise (systematic deep breathing, gymnastics of the thorax) is of great therapeutic value. All this holds good in patients whose circulation is poor and sluggish as shown by cold feet, dry skin, sallow complexion. Derivating procedures are valuable, especially if there is a tendency towards intrathoracic congestion. Most of these patients derive a great deal of benefit from walking in wet grass, as taught by the great hydrotherapist, Father Kneipp. If the chronic

bronchial catarrh is associated with, or due to, disease of the heart, lungs, kidneys or any other part of the body, the causative condition should, of course, receive careful attention.

Additional Therapeutic Measures.—

Faradization or galvanization of the pneumogastric is of great value in the treatment of chronic bronchitis. Two sponge electrodes should be used, one being placed on the side of the neck, the other between the sternal ends of the clavicle and thence moved toward the epigastrium. The effect of this treatment can be much enhanced by vibration of the cervical region of the thorax and over the chest-wall generally. The strokes should be light and rapid. The treatment can be repeated daily for ten or fifteen minutes at each sitting. In cases of intrathoracic congestion a negative static spray is frequently of value. Spasmodic cough often yields to a simple static insulation. The alternate effects of exercise, particularly walking, rowing, swimming and horseback-exercise, are of the greatest therapeutic efficacy in many of these cases. General elimination through the skin should be enforced two or three times a week in most cases.

OTTO JUETTNER.

Cincinnati, Ohio.

REMARKS ON THE LESSON

In the treatment of bronchitis sufficient stress cannot be laid upon the fact that while in many cases the disease is idiopathic, that is, a disease *per se*, it is almost more often symptomatic of another underlying affection by which the bronchial inflammation has been induced. The two principal causes of symptomatic bronchitis are influenza and tuberculosis, and of these the latter is the more important one. Birch-Hirschfeld has shown, in 1898 and 1899, that an aerogenic tuberculous infection may become localized and lead to tuberculous lesions in the third and fourth divisions of the posterior apical bronchus; more often on the right than on the left side. In such a case the bronchial mucosa becomes considerably irritated, and

in this form of bronchitis the tuberculous nature of the affection can early be determined microscopically.

Another frequent cause of bronchial irritation and inflammation we have in the inhalation of dust, especially in dusty trades, such as in garment workers and in stone workers. In spite of many ingenious contrivances which have been invented and put in operation in the last thirty years, by which the dust is sucked away from the workmen, the inhalation of a considerable portion of dust cannot be avoided, which then not only inflames the bronchial mucosa but passes through it, being partly deposited in the lymph-nodes, especially at the hilus of the lung, and partly in the lung parenchyma, where it may cause mechanical disturbances.

An important factor in the treatment of all affections of the respiratory organs is very apt to be lost sight of, and that is the free inhalation of pure air. Persons who habitually breathe deeply and who expand their chests fully on inspiration are less apt to acquire bronchitis and kindred affections than are shallow breathers. In chronic bronchitis a change of climate may be productive of the happiest results if this is a change to purer air.

COMMENTS FROM THE STUDENTS

We are much gratified by the interest shown on the part of our students in the Postgraduate Course and the splendid work they are doing. We should like to be able to print all the answers as well as comments upon the lessons, but that is manifestly impossible. Don't run away with the idea that those contributions from our students which we do print are the only good ones, or even the best ones. We are obliged to exercise some sort of selection, sometimes for a particular point which is brought out, sometimes, we confess, by a somewhat blind chance, a sort of grab-bag affair, choosing at random because we cannot determine a better or best. Nevertheless all replies received are carefully read and commented upon.

We can print here only a very few of the nice things that are said to us concerning the Course. Here are a few specimens:

Dr. L. R. Hawkins of Brewster, Kansas, writes: "You have no idea how much good I glean from the examinations, and there isn't a certificate in my office that I shall think more of than the certificate I expect to receive from the Postgraduate Course for the year 1909."

Dr. W. C. Eustis, Owatonna, Michigan: "I find the Postgraduate Course very helpful and hope it may always be continued. Any physician who answers the questions as he is able, regardless of the marking he may get, is sure to be greatly benefited."

Dr. J. C. Dignan, Wellington, Ohio: "I wish to thank you for your excellent work during the past year."

Dr. C. E. Buckley, Cherryvale, Kansas: "I have enjoyed the Postgraduate work during the past year and I thank you and your coworkers."

Dr. Victoria S. Ernst, Bridgewater, Nova Scotia, Canada: "I like the Postgraduate Course very much indeed, and hope it may be continued for a long time—indefinitely."

Dr. G. W. Mullins of Milano, Texas: "The last year's Postgraduate Course has been worth more to me than any former course I have ever taken."

Dr. P. H. Acuff, Washburn, Tennessee: "I assure you the Postgraduate Course has been of the greatest value to me. I am very much interested in your most logical views of conditions treated of in this course."

Dr. A. S. Thompson, McDonald's Corners, Ontario, Canada: "I cannot let the end of the year pass without attempting to thank you for the value the course has been to me, and I would also remember the demands such work has made upon your time and mind. Such work is only possible to men who have the good of the profession at heart. I therefore want to acknowledge my personal indebtedness to you and your associates."

The Director and his associates thank all who have favored us with letters for the kind expressions of appreciation concerning the work they have been trying to do. The

reading and correcting of the many papers which are sent in entails a great deal of work, and which sometimes by no means is easy; but we feel fully repaid for our trouble in the knowledge of being of assistance to our friends and by the further assurance that our efforts are understood and are of benefit.

High Temperatures in Typhoid Fever.—Dr. D. Y. Phadnis of Kagal, Bombay, India, says about the management of high temperatures in typhoid fever:

"With regard to the high temperature in typhoid fever, I think it an error to consider its elevation as a thing to be attacked as if it were a disease in itself, when, in fact, it is a sign or a result of the effects of the poison secreted by the germs. Some men rejoice to see the temperature fall as a result of their treatment. No doubt the lowering of temperature has a very beneficial effect on the patient, but this decline is not lasting, for after some hours the temperature again rises, and so we again must give the same drugs which influenced the fever. The only drugs having the power of forcibly reducing the temperature are coaltar preparations, as antipyrin, phenacetin, antifebrin, carbolic acid, etc.; but all these are depressing and toxic, and should, therefore, be discarded altogether.

"It is admitted, however, that a long-continued high fever is quite dangerous to the patient. If one intends to use those antifebrile drugs recommended in dosimetry, such as the defervescent compound or dosimetric trinity, they should be employed only with due regard to the pulse, and must be given until the result is attained. These granules should, however, be given only in the first week of the attack. Still, the best thing is not to interfere till the temperature rises above 106° F. and the patient's condition arouses the physician's anxiety. When, however, the temperature keeps above 104° F., with but slight morning remissions, and our antiseptic treatment with the sulphocarbolates fails to reduce it, then we must employ such means that will reduce the fever but are harmless to the patient, and for this purpose hydrotherapy is the best."

Your idea is correct, Doctor. It is a mistake to force or club the temperature down with coaltar products, for it will surely take another upward jump as soon as the action of the drug ceases. The only way to control the temperature lastingly is to eliminate the cause, that is, to fight the typhoid bacilli and, still more important, to counteract their toxic effects. The sulphocarbolates fulfil both indications nicely in connection with eliminative treatment. In the meanwhile hydrotherapy has for many years been an established means of preventing the fever from rising beyond bounds, that is, of preventing it from rising to a dangerous degree. Remember that a uniformly high temperature (unless it be above the danger-point) is less harmful to the patient than a fitful temperature which shows large remissions, only to rise again. The latter exhausts the patient rapidly. Nevertheless, I should not care to leave my patients at a temperature of 104° F. without reducing it by gentle means. I think the limit of safety is lower than you give it.

Abortion of Pneumonia.—Dr. T. H. Line, Marquette, Nebraska, gives a very interesting paper and we judge that he is a successful practitioner. Dr. Line believes that pneumonia can be aborted. He says:

"I am a believer in the abortive treatment of pneumonia. I begin with the usual routine of thoroughly emptying the alimentary canal and disinfecting it as thoroughly as it can be done, applying at the same time a libradol paste-poultice and giving alternately every half, one, two or three hours, according to the severity of the fever, the dosimetric trinity No. 1, and defervescent compound No. 1—I get better and quicker results when I use these two granules alternately, both in sthenic and asthenic types, than when I give one without the other. For the cough I use a mixture of codeine, ammonium chloride and syrup of lactic acid in water. To counteract hypostasis, stimulating applications to the chest, and frequent change of posture have served me best, although sanguinarine is much lauded. The diet is limited to liquid food whenever it can be digested. I have

found that a forced diet does more harm in a fever than it does good. Every case will require a different diet to be appreciated by the patient. I have not had a severe case of pneumonia for a number of years. Whether it is owing to the above treatment or to luck, I leave for others to decide."

Malarial Fever in Honduras. Immunity of Negroes.—Dr. J. Abbott, Oak Ridge, Ruatan, Spanish Honduras, writes as follows regarding malarial fever, and in answer to Dr. Juettner's request for information concerning malarial fever and negroes (see CLINICAL MEDICINE for January, p. 120):

"During the last ten years I have treated more than one thousand cases of malarial fever on this island. I have lost but one case and that one a boy thirteen years of age, who died from blackwater fever; but I was only called to see him two hours before his death. His was the only case of "blackwater fever" that I have seen on the island, but there is a plenty of it on the mainland, 35 miles south of us, where all varieties of malaria are of a severer type than they are on this island. Here nearly all cases are of a mild nature.

"In answer to Dr. Juettner's request for information concerning the negro, as to whether he is immune from malaria or not, I answer, No, for I find that both the Negro, and the Carib Indian, who has a dark skin, suffer as much as the white man from malarial infections of all kinds."

The Treatment of Pneumonia.—Dr. A. A. Stuart of Lincoln, Michigan, describes the alkaloidal treatment of pneumonia as follows:

"Give calomel, gr. 1-6, and podophyllin, gr. 1-6, every half hour, for three hours. Follow with a teaspoonful to a tablespoonful of effervescent magnesium sulphate one hour after the last dose of calomel and podophyllin. Repeat the saline every twenty-four hours. Give an enema of warm salt water. After the bowels have moved give from 5 to 10 grains of the sulphocarbolates every three hours, giving with each dose of sulphocarbolates a drink of water. To relieve the local congestion use aconitine,

digitalin and veratrine every half hour or every hour until the skin moistens, the temperature falls and the pulse-rate reaches 80 or lower. In asthenic cases strychnine takes the place of veratrine. Administer nuclein in 10-minim doses if the patient is weak, in order to induce a hyperleukocytosis. For pain in the chest give bryonin, gr. 1-67, and hyoscyamine, gr. 1-250; or if pain is severe, give a hypodermic of morphine, 1-8 to 1-4 grain. The dosage and frequency of treatment must vary according to the condition of the patient and the judgment of the physician. Codeine sulphate usually is sufficient for the cough. If the patient is nervous and wakeful give veronal, grs. 15. Give potassium acetate or citrate, grs. 15, three times daily, if the urine indicates its use. For the heart, give strychnine, digitalin and whisky in small, often repeated doses. In case of collapse use amonia."

Physical Forms of Treatment.—The same writer says:

"To deplete the congested area is the first indication. Apply a cold moist-pack from the feet to the costal border, allowing this to remain on one hour after covering with comforts. Repeat this two or three times daily. A cold application to the chest, as well as an ice-cap, may be advantageous. After removing the pack rub the patient dry. *Keep the skin active.* For pain in the chest order hot local applications. Massage the abdomen and give an enema. Keep the room well ventilated. In the stage of exudation, if the temperature exceeds 103°F., administer a cold sponge-bath and follow this up with a dry-rub. Use an ice-bag for local consolidation. Faradic treatments sometimes strengthens a weak heart. For headache use massage. For my own treatment of pneumonia I should use the alkaloidal treatment with the addition of a little quinine. I have always felt that quinine was very useful in pneumonia."

Dr. Stuart adds also: "It is my honest conviction that pneumonia can be aborted. I have frequently had patients with the initial chill, high fever, etc. For instance in the case of a French lady of 24. As I

entered the bedroom, I said: 'I know what is the matter with you.' Her right cheek was flushed, breathing rapid. There was high fever ushered in with a chill, pain in the chest, scanty urine, sputum of a reddish color. I immediately opened the window and tacked a light cloth over the open space. Gave the patient a cold soda bath. Next I gave an enema and followed this with calomel, grs. 5, followed with teaspoonful doses of saline laxative every three or four hours. Aconitine, digitalin, veratrine every hour until fever and pulse were markedly lowered. To this I added quinine, grs. 2, every three or four hours. I kept this treatment up and had no consolidation. I also administered nuclein solution and the following tonic:

Nux vomica.....	drs. 2
Tincture of rhubarb.....	drs. 2
Alcohol	drs. 4
Water, q. s. ad.....	ozs. 4

Label: A teaspoonful in water before each meal.

If the system is depleted and blood is drawn away from the congested area there is no reason why consolidation should occur. But in weak patients, and in the aged, I believe it impossible to prevent it. In the early stages of pneumonia use a hot-pack after applying a little guaiacol and camphorated oil to the chest. Apply a cold-pack from the ribs to the feet, and perhaps from the neck to the feet, depending on the condition of the patient and the physician's judgment. Repeat this two or three times daily. For pain in the chest a local hot application could be used. For consolidation: local ice-bags.

"The most frequent complications of pneumonia are pleurisy, endocarditis, pericarditis, meningitis, arthritis. For the pleurisy of pneumonia the treatment is calceidin, blister, codeine, morphine and atropine, and the defervescent compound. For endocarditis or pericarditis: an ice-bag and massage, morphine and atropine; salicylic acid if rheumatism is suspected. For meningitis: migraine tablets if the heart is strong; ice applied to nape of neck and head, Spirit

of camphor for depression. Veratrine to eliminate. For arthritis: triple arsenates, salithia, salicylates."

Dr. Stuart is of the same opinion as are many other practising physicians who have used the active-principle method, namely, that pneumonia can be aborted. He feels positive that if more physicians would treat pneumonia according to these principles it would not be considered so fatal a disease as it now is.

Pneumonia in Children.—Dr. J. Zimmerman, Lynnville, Ind., reports the following case of a child suffering from pneumonia and gives his treatment:

"The patient was a child, male, white, age 6 months. Temperature, 103°F., respiration 50, pulse 135. There was increased expiration with râles over both lungs, and much meteorism. I commenced treatment by giving one-tenth grain of calomel, half-hourly for eight doses followed with castor oil. Then I gave one grain of the compound sulphocarbolates every two hours, and the defervescent compound every hour, changing later to the dosimetric trinity. I gave emetin and bryonin together every two hours, later. On the third day, as the temperature was 102°F., cyanosis present and collapse threatening, I gave atropine, glonoïn, digitalin and strychnine, and a decided change speedily manifested itself. As the tympanites was marked I put a kaolin poultice on the abdomen, gave an enema, and that symptom was relieved. The patient made a good recovery in about ten days. I have had a number of cases similar to the above, all treated in the same way with the same results."

Nowhere has the heart to be supported and coaxed as much as in these little patients, since they pass so easily over the great divide. The doctor met the danger with emphasis and carried the little baby through beautifully. We doubt whether that could have been done without drug treatment, and more especially without employing the active principles.

Alkaloidal Treatment of Pneumonia, as employed by Dr. A. Graves, Mehama, Ala., is as follows:

"Aconitine, veratrine and digitalin in sthenic cases, and aconitine, digitalin and strychnine in asthenic cases to overcome the vascular paresis in the congested area, to overcome contraction in the balance of the circulation, and to promote elimination. These combinations lessen the congestion by establishing circulatory equilibrium, reduce the fever and relieve and steady the overburdened heart. Sanguinarine stimulates the pulmonary tissue and helps to overcome hypostasis; codeine and emetin take care of the cough; calomel, podophyllin, saline laxatives and the sulphocarbolates take care of the alimentary canal."

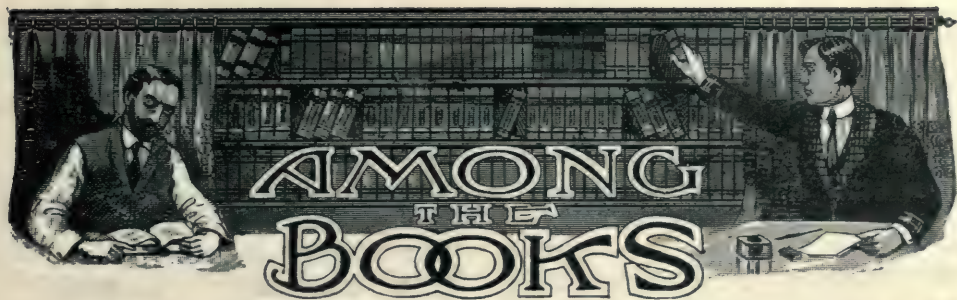
For the Physical Treatment, he says: "Make hot applications to the lower extremities and over the abdomen, and cold applications to the head if there be delirium."

"I have never had but one case of pneumonia in the extreme of life and that was in an old man seventy years of age. In this case I substituted strophanthus for digitalis and increased the dose of strychnine; otherwise my treatment was the same as in other adult cases. The case ran a typical course and the patient recovered."

This treatment might be called a *multum in parvo*; it certainly covers the most important indications and will, as a rule, give excellent results.

EXAMINATION QUESTIONS

1. What diagnostic information may be obtained from the examination of the sputum in bronchitis?
2. What are the predisposing causes of bronchitis?
3. How do you treat acute bronchitis? chronic bronchitis?
4. Enumerate some of the difficulties met with in the treatment of chronic bronchitis.
5. When is it proper to prescribe morphine or other derivatives of opium in bronchitis, and why?
6. Describe the principles of physiotherapy as applied to bronchitis.
7. Have you had any success in treating the chronic bronchitis of old people? If so, give case histories.
8. What is, in your opinion, the best treatment of bronchitis in children?



KELLY AND CULLEN'S "MYOMATA OF THE UTERUS"

Myomata of the Uterus. By Howard A. Kelly, M. D., Professor of Gynecologic Surgery at Johns Hopkins University; and Thomas S. Cullen, M. B., Associate in Gynecology at Johns Hopkins University. Large octavo of 700 pages, with 388 superb original illustrations by August Horn and Hermann Becker. Philadelphia and London: W. B. Saunders Company. 1909. Price, cloth, \$7.50 half morocco, \$9.00 net.

This volume deals almost exclusively with work done by those connected with the gynecological department of Johns Hopkins Hospital and University. The number of cases from which the teachings of this book are derived is 1674. The book is important for the expert specialist as well as for the practitioner who needs a thorough diagnosis in uterine diseases and organs neighboring to the uterus.

The practical work done by the authors of this book is immense, the patience astonishing, and the service rendered by it to humanity a matter of gratitude to the God of humanity and to his servants, the authors.

THE "ABSTRACT SERIES"

Vest Pocket Abstract Series on Medicine, Dentistry, and Pharmacy. Published by The Medical Abstract Publishing Company, Pittsburg, Pa. Price per volume, flexible leather cover, \$1.00.

The precious little volumes of this series before us are, respectively, on Anatomy, by

Stewart L. McCurdy, A. M., M. D.; Physiology, by F. A. Rhodes, M. D.; Chemistry, by John Inglis, A. M., M. D.; Materia Medica and Therapeutics, by Charles A. Orr, A. M., M. D.; Histology and Bacteriology, by A. B. Wallgren, B. S., M. D.; Medical and Surgical Emergencies, by Stewart L. McCurdy, A. M., M. D.; Physical Diagnosis and Laboratory Diagnosis, by H. P. Kohberger, Ph. B., M. D.; Obstetrics, by Wm. D. Inglis, A. M., M. D.; and Medicine, by H. P. Kohberger, Ph. B., M. D.

These volumes are not meant to teach, but to remind quickly the physician or medical student who has been taught well and learned well the subjects treated of in these volumes and who is anxious just now to rehearse and recall rapidly the salient and important points of a subject just under consideration. For such a purpose the conception of these volumes is excellent and their elaboration in the true sense of *multum in parvo* admirable.

SIDIS' "STUDY OF SLEEP"

An Experimental Study of Sleep. (From the Physiological Laboratory of the Howard Medical School, and from Sidis' Laboratory.) By Boris Sidis, Ph. D., M. D., Boston: Richard G. Badger, The Gorham Press. 1909. Price \$1.00 net.

This is a pamphlet of 99 royal octavo pages. The subject-matter is divided into two parts, Experimental and Theoretical. It is written in very clear style so that anyone acquainted with biology can get well at the author's ideas and at those of other authors on the subject which Dr. Sidis

quotes. It is a work with which an educated physician ought to be acquainted.

BREWER'S "SURGERY"

Text-Book of Surgery. For Students and Practitioners. By George Emerson Brewer, A. M., M. D., of the College of Physicians and Surgeons, Columbia University, New York. Illustrated with 415 engravings in the text and 14 plates in colors and monochrome. Second edition, thoroughly revised and much enlarged. New York and Philadelphia: Lea & Febiger. 1909. Price \$5.00.

This book comprises 915 octavo pages, of which 40 are occupied with a good and useful index. The author, we think, succeeded in giving us a very useful book on surgery just "midway between a brief manual and a more-volumed treatise." There is need for such a book which comprises all surgical advances to date.

CALKINS' "PROTOZOOLOGY"

Protozoology. By Gary N. Calkins, Ph. D. Illustrated with 125 engravings and 4 colored plates. New York and Philadelphia: Lea & Febiger, 1909. Price \$3.25.

Fifty years ago, when graduating supplementarily in the University Gymnasium of Vienna in order to enter the Austrian naval service as physician and surgeon, I presented the Latin thesis required of me on the thought comprised in the title, "*Est de Cellula Magis Argumentum Putehdi Deum*," because in it all the functions of life are carried out without differentiated complex organs. It was with the feeling of a realized vision when I read in the preface of this "Protozoology" of Calkins the following words:

"Here in these mere specks of animated jelly, which rarely measure more than the hundredth part of an inch, we find in their simplest form the manifold processes of the living organism. Digestion and assimilation; respiration, with its dual action of oxidation and renewal; excretion and secretions; irritability and fatigue; reproduction

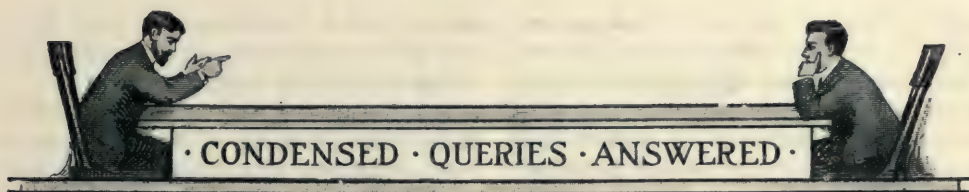
together with the unfathomed mystery of fertilization and inheritance, all find expression in these simple animals and raise the lowest protozoon immeasurably above the most complex of nonliving substances."

The object of this book, the author avows, is to check, if possible, the prevalent idea that the study of protozoology is useful only in so far as the few pathogenic protozoa involved are concerned. His object is to show the great variety, beauty, and aimfulness of this vast class of minute living creatures, and from these to approach to a deeper understanding of what life and its powers are. It is reassuring to see such a work done, for it can be for no other object than for the love, the higher love, of the knowledge of life. So idealism is not dead. The author says this book is not intended to be exhaustive of the subject, and yet its 335 pages contain beyond what many an educated person would hardly dream of there being in the living world. I can not close these remarks without my sincere thanks to the author for his untiring labors to increase our more accurate and detailed knowledge of life.

HYDE'S "SKIN DISEASES"

Diseases of the Skin. A Practical Treatise for Students and Practitioners. By James Nevins Hyde, A. M., M. D., Professor of Dermatology in Rush Medical College, Chicago. Eighth edition, revised. Illustrated with 223 engravings and 58 plates in colors and monochrome. Philadelphia and New York: Lea & Febiger. Price \$5.00.

This important treatise of some 1100 royal-octavo pages, closely printed, is thoroughly up to date and the most comprehensive reference-book on diseases of the skin in the English language. That it is reliable both as to diagnosis and treatment will be accepted wherever the name of the author is known, and that is far and wide. Taking into consideration the great intrinsic value to the practising physician in addition to the excellent mechanical execution of this work it is a wonder that it can be sold at such a reasonable price.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5561.—“Calcium Sulphide in Diphtheria.” B. G. O., New Jersey, has been informed that we have used and recommended calcium sulphide in diphtheria cases and that it has been very successful in destroying the bacilli. If this is correct, he says, he wants data on the subject as to the extent to which it has been used and the results obtained.

We have taken great pleasure in sending such literature as we have on calcium sulphide, and shall be pleased to answer any definite questions you may wish to ask.

As you know, this drug is one of the best systemic antiseptics we possess, but it must be given to “saturation,” i. e., one to six granules of 1-6 grain each should be taken every thirty to sixty minutes for the first day, then four to six times daily to maintain effect.” “Saturation” is secured when the patient’s breath and secretions smell strongly of sulphureted hydrogen.

We have not at any time and do not now advance calcium sulphide as a “definite remedy” for diphtheria, but it is essentially indicated by the conditions present in this disease; and patients who are saturated with it are not likely to be as severely infected or present the serious conditions which would obtain where calcium sulphide is not used. We realize, as does every other thinking physician, the importance of the early use of antitoxin, but we also believe, in fact we know, that when antitoxin is not available satisfactory results will follow the use of nuclein, calcium sulphide and calx iodata.

We would point out, however, that the positive therapist does not treat named diseases, but the pathologic conditions present in the individual, recognizing particularly the underlying disturbance of the body-chemistry. He realizes that where normal metabolic conditions exist the invasion of the system by pathogenic bacteria is comparatively a trivial matter; but resistance lowered and an autotoxemic state prevailing, such invasion becomes serious. Hence our constant advocacy of elimination and intestinal asepsis.

It would not avail to give calcium sulphide where absorption is practically *nil*, the intestine filled with toxin-breeding material and the entire body-chemistry deranged. Sweep out the gross debris, render the bowel, kidneys and skin as active as possible, and then push the indicated remedies to effect, and you *must* get results!

Calcium sulphide, then, is advocated by us as one of the essential remedies in diphtheritic conditions. The sooner it is given (provided it is given correctly) the better; in fact, people exposed to infection should receive calcium sulphide early and remain saturated till danger of infection ceases. Such individuals will rarely present evidence of the disease.

In conclusion let us call attention to the fact that the pills or tablets of calcium sulphide generally marketed are rarely satisfactory. This is a peculiar drug, pressure rendering it as “hard as rock;” hence (especially when absorption is poor and the

gastric secretions deranged) such masses are prone to pass through the alimentary canal almost entire. The correctly made granule is friable, disintegrates almost instantly in the presence of warmth and moisture, and saturation almost invariably follows its use; in fact, you can get better results from giving 25 to 30 1-6-grain granules of the right kind than you could from double the number of 1-grain tablets made by compression. Moreover, there is calcium sulphide and calcium sulphide. Some specimens purchased on the open market have proved utterly worthless therapeutically.

QUERY 5562.—“Injections of Lobelia.” G. W. B., Maryland, desires to learn of some preparation of lobelia that will not “set the patient crazy” for a while when injected.

We regret to say that at the present time there is no preparation of lobelia known which will not cause local irritation when injected hypodermically. We are working sedulously upon this very subject, and if worked out shall offer it to the profession. In the meantime you will find lobelin injected into the urethra or rectum to produce nearly all the results you could obtain from the hypodermic injection of the drug. Did you see the articles which appeared in *CLINICAL MEDICINE*, recently, upon this topic. What has been your own experience?

QUERY 5563.—“Hepatitis.” J. B., Missouri, is treating a boy twelve years of age who has for the past five weeks complained of pain in the right-side space just below the subaxillary region, in other words, just below the ribs in the midaxillary space. He has no tenderness upon pressure, no enlargement or discoloration except that there is an icteric hue all over his body. At the hour of 10 or 11 o'clock at night he starts in crying with pain, and keeps this up until 3 or 4 in the morning. One doctor, we are informed, has not made any tests and has seen the patient only while making another call in the country, but he wrote our correspondent: “The character of complaint being somewhat out of the ordinary induced

me to solicit assistance. He has been treated for about five weeks by another physician without any relief at all.”

This may be a case of hepatitis. The limited data presented will not enable us to form a diagnosis or to make any really useful therapeutic suggestions, but if you will make a careful physical examination and report succinctly the findings and send, at the same time, specimens of the urine and a blood-smear we may be able to speak positively. Examine the stools carefully, and if they are at all abnormal send a specimen.

Pending precise medication, Doctor, you cannot do much better than order quinine hydrobromide and berberine every three hours, with iridin and euonymin before meals and chionanthin after eating; a saline laxative every morning upon rising will, of course, prove beneficial. Hot salt-sponge-baths suggest themselves, while the bowel may, with advantage, be washed out with an alkaline antiseptic solution. What is the family history? Are you in a malarial region? It might be well to start treatment with a good dose of castor oil.

QUERY 5564.—“Wanted, a Never-Failing Aphrodisiac.” E. S. P., Kentucky, writes: “I want a never-failing remedy in impotence. I have used the ‘aphrodisiac’ formula, but it does not seem to give the required satisfaction. Please name remedies that never fail, if you know of any. I prefer alkaloidal granules to pills or liquids; patients have very little objection to taking the former.”

The treatment of “impotence,” Doctor, is no easy matter, and no single combination or arbitrary line of treatment could possibly prove applicable in all cases. Moreover, doctors being fallible, there are no “remedies which never fail.”

The success of the positive therapist is due to the fact that he diagnoses closely and gives the right remedy for the conditions present in small repeated doses to effect—remedial or physiologic. Practically none of the active principles fail to produce definite results when used correctly, but you must not expect success if you prescribe

aconitine where veratrine is indicated, or veratrine where gelseminine is called for. You see the point, of course? Further, an aphrodisiac may be directly called for in a given case, but before it can exert its full influence it may be necessary to dilate the anal sphincter or correct hyperesthesia of the deep urethra or a prostatic congestion.

Aconitine is, perhaps, one of the most promptly efficient and positively active remedial agents at the disposal of the modern therapist and tens of thousands of practitioners use it daily with infinite satisfaction, still, now and again we receive a complaint that aconitine "does not reduce fever." Investigation proves that the doctor has failed to remove from the intestinal canal a mass of toxin-producing material or has omitted to carry out some other essential therapeutic procedure. The therapist is more likely to fail than a definitely acting therapeutic agent.

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QUERY 5565.—"Nephritis with Bladder Involvement." W. H. T., Kansas, submits a specimen of urine passed by Mrs. S., sick more than a year. When first seen, eight months ago, she was pregnant three months. Her urine had a specific gravity of 1010, contained lots of albumin, and there was frequent desire to pass water both night and day. Under treatment the albumin diminished and for a time the pain on passing urine was greatly diminished. The woman was delivered of a strong, healthy child, nursed it four months, then was compelled to wean it as her health was again failing. She now passed blood with the urine, also a good deal of mucus and pus, but all the time there has been great pain in passing water both during the act and after it for a little while; pain is the prominent symptom. The doctor adds:

"She is not, seemingly, losing flesh now. She weighs 100 pounds, is 5 feet, 5 inches tall, has had three children, no miscarriages, and has always had good health until about one year ago. She took a severe cold then and dates the beginning of her trouble from that. She has no stomach trouble, eats fairly well and has good digestion; is in-

clined to constipation but not hard to move. The bladder is shrunken so that it holds but little water before it has to be voided; the urethra seems very tender and is swollen. She passed 48 ounces of water in the last twenty-four hours."

The report of our pathologist reveals low acidity, indican, insufficient urea, hyaline casts, pus-cells, urates, uric acid, and albumin. Every symptom indicates that this undoubtedly is a serious case—a nephritis, unquestionably, and involvement of the bladder. Under the circumstances we suggest irrigation of the bladder with warm boric-acid solution twice a week, and copious enemata of decinormal salt solution at body-temperature every other or third day. Place this woman upon an absolute milk diet, having her consume two quarts of milk daily, and she should "chew" each mouthful so as to secure thorough mixture of insalivation. Saline laxatives will be of service; order a small teaspoonful of effervescent magnesium sulphate in a glass of hot water on rising. Give aconitine, digitalin and strychnine, repeating the latter at noon and night. In addition give arbutin in full dosage four times daily, with a dram of a good preparation of hydrangea, and every four hours formin with ammonium benzoate. Keep the skin active with salt sponge-baths. We believe you will find marked improvement in a month from this regimen.

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QUERY 5566.—"Thiosinamin in Stricture." T. C. R., New Mexico, desires to know whether thiosinamin can be used in an ointment worked back to a urethral stricture. Absorption with minimum irritation is the object to be attained.

Read the article on thiosinamin by Dr. Waugh, which appeared in this journal for last January, where the use of thiosinamin in stricture is referred to. Thiosinamin exerts a systemic effect and so need not be applied locally. Hypodermic injections may be given twice a week, an ointment containing papain, pepsin, thuja and carbenzol being applied locally. A small quantity of lobelin may be added. The character of

the stricture must always be considered. In some cases section of the stricture is absolutely essential, while in others gradual and careful dilation of the canal with steel sound suffices. It must not be forgotten that excellent results can be obtained in urethral stricture by the use of the galvanic current, with copper electrodes. Do not on any account use thiosinamin in the urethra until you are thoroughly familiar with the action of the drug.

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QUERY 5567.—"Rhus Poisoning." K. J. S., Tennessee, asks for a specific line of treatment for poisoning from rhus toxicodendron.

There is probably no better treatment for rhus poisoning than of rhus toxicodendron internally in small repeated doses, after brisk purgation, in conjunction with local applications of carbolyzed solutions of magnesium sulphate, the compresses being applied hot as is tolerable. Echinacea may be painted on the skin first.

The best purgatives for use are calomel (or blue mass), podophyllin and iridin. Follow these with a laxative saline draught. In some cases use in place of the magnesium sulphate a solution of ammonium chloride, 1 ounce to 2 pints of water. We have had success, in some cases, with fluid extract of grindelia and 3-percent solutions of salol, but the measures first suggested will prove effective in practically every instance. In California they use cypripedium, 1 part to 4 parts of water, with perfect success, it is said.

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QUERY 5568.—"Gelseminine as an Anodyne." F., Iowa, inquires whether gelseminine is equal as a pain-reliever to morphine? Does it act as quickly? Should it be given alone or in combination? If the latter, with which agents?

Gelseminine is not to be looked upon as an anodyne proper, but as a good antispasmodic and antipyretic, acting mainly through the spinal cord. It is indicated where there is extreme nervous tension, bright eyes, flushed face. One tablet may be given when the indications for the drug

are present, but the dose should rarely be repeated within twelve hours. We have found, however, that a small quantity of gelseminine added to a hypodermic injection of morphine almost doubles the efficacy of the latter drug.

We would urge a perusal of the chapter on gelseminine in "Alkaloidal Therapeutics." Bear in mind the specific indications: flushed face, bright eyes, contracted pupils, restlessness, excitement, headache, increased heat of the head. Administered when these conditions obtain, gelseminine will produce prompt and positive results.

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QUERY 5569.—"Drug-plant Culture." A. S., Ontario, desires to know whether *hyoscyamus niger*, *atropa belladonna* and *digitalis purpurea*, when cultivated in this climate, produce a leaf containing their respective alkaloids in commercial quantities. "I find," he writes, "some difficulty in securing accurate information about the culture of drug-plants suitable to experiment with in this climate. Perhaps you can put me on the track of it."

Johnson & Johnson have been experimenting with *hyoscyamus*, *belladonna*, etc., and claim that the American-grown plant produces the alkaloids in satisfactory proportions. We suggest that you write to them for literature. They have issued several very interesting articles on this subject. *Digitalis* has not been grown successfully in this country, the best article coming from England. Some fairly satisfactory specimens of the plant have been grown in Washington, but we do not think any appreciable quantity of the plant has ever been collected.

We suggest that you address the Superintendent of Documents, Department of Agriculture, Washington, D. C., enclosing 25 cents for postage. You will receive some very interesting booklets, of which the one by Rodney H. True, physiologist in charge of drug-plant investigations, should prove of particular interest. It might be a good idea to write direct to Dr. True. We note in Dr. True's report that the foxglove can be successfully raised in South Carolina and state

of Washington. Belladonna, as he says, does well in a good garden soil, and that cultivation of belladonna on a commercial scale has been taken up successfully during the past two years by an American firm of druggists.

QUERY 5570.—“Vesical Distress.” G. P. H., Indiana, states that he has several patients with distressing bladder symptoms who would be grateful for something that will relieve the condition.

To prescribe, blindfolded, intelligently for “vesical distress” is impossible, for the conditions causing the discomfort or pain must first be recognized. Examine each patient carefully, and send a clinical report together with four ounces of urine from the entire amount passed in 24 hours, stating the total amount voided during that period.

It is quite likely that an underlying acidemia exists, which requires correction. Arbutin, formin, hyoscyamine, collinsonin, hydrastin, barosmin, etc., are all indicated in the disorders which set up distressing bladder symptoms.

The success of the positive therapist is due to the fact that he diagnoses closely and gives the right remedy for the condition present in small repeated doses to effect—remedial or physiological.

Naturally distress due to hyperacidity and an inflamed vesical mucosa will not yield to the remedies which would be indicated in cystitis with an alkaline urine. Hyoscine and morphine will, of course, relieve pain, and combined with diuretics and antiseptics generally prove useful in vesical disorders. Asparagin, barosmin, lithium benzoate, etc., have their special indications.

QUERY 5571.—“Arbutin in Senile Incontinence.” H. N., Indiana, wishes to be informed whether arbutin is a positive remedy in the dribbling of urine in the aged?

Arbutin cannot be regarded as a “specific” in the condition named. While this drug is a very useful remedial agent in such conditions, still, in many cases marked by atony of the vesical sphincter it is essential to ad-

minister strychnine (preferably the hypophosphite or valerianate) and minute doses of cantharidin. Thuja may be added in some cases with advantage. The urine should always be examined, hyperacidity or alkalinity corrected, and prostatic and rectal disorders attended to.

QUERY 5572.—“Anatomical Textbooks.” J. W. C., Alabama, asks whether we would advise an old practitioner who has let his anatomy grow musty to procure Gray’s “Anatomy” or Dr. Pilz’s anatomical manikin. A postgraduate course at this time is impossible. Some illustrated work on surgery, dislocations and fractions is also desired.

Gray’s “Anatomy” (last edition) unquestionably is valuable, but Piersol’s “Human Anatomy” (Lippincott), and Sobotta’s (McMurrich) “Atlas and Textbook of Human Anatomy” are more modern and, we think, more definitely instructive works. The price of “Human Anatomy” is seven dollars. Keene’s “Surgery” or the “American Textbook” should serve also well. Stewart’s “Handbook of Surgery” (published in 1907) is one of the most compact, practical works we know of. Scudder’s “Treatment of Fractures and Dislocations” is unequalled. It is published by Saunders Company, and costs \$3.50.

QUERY 5573.—“Removal of Warts.” R. B. B., Kansas, wishes to know the best thing to use for the removal of common warts, seed-warts, etc., on hands or feet. A boy patient has a very troublesome wart on one knuckle of his right hand which caustic failed to remove.

Common warts usually yield to the application of specific tincture of thuja and the internal administration of one or two grains of magnesium sulphate several times daily. Another excellent formula is: Paraformaldehyde (Merck), 24 grains; castor oil, 12 minims; collodion, 1 ounce. Apply with a camelshair pencil, shaking well before using. Application should be made every two days or until a considerable layer has formed. This should be removed and the wart filed or scraped away and a new appli-

cation made. This treatment has practically never failed in the writer's hands.

QUERY 5574.—"Dosage of Calx Iodata." J. H. P., Kentucky, has a patient (boy) 3 1-4 years of age, to whom he gives calcidin in 1-3-grain doses every two hours during the day and every 1-2 hour after supper until he has had four or five doses. He usually continues this treatment for two or three days to control coryza or bronchitis. The doctor wishes to know whether this amount of calcidin is detrimental to the child's health. Also, whether we consider calcidin beneficial in colds where there is a considerable amount of phlegm.

Calx iodata, as here prescribed, should not do harm, but rather it is more likely to prove beneficial. If there is much of bronchial secretion, emetin, scillitin, or apomorphine should be given alternately with calx iodata. We advise you also, doctor, to clean up this child's intestinal canal, bearing in mind that any individual constantly "catching cold" must have some underlying disorder, probably a chronic autotoxemia. A tonic in this case would be beneficial, the arsenates with nuclein, for instance.

QUERY 5575.—"Trifacial Neuralgia." J. S. L., Pennsylvania, has a patient who has received osmic acid injections three times, relief following which lasted six months. The trouble now has returned and the Doctor considers injections of alcohol, having somewhere read of their efficacy in these conditions, and he asks for specific information concerning this procedure.

Before we can make intelligent suggestions we must have a clearer idea of conditions present in this particular case. Personally we have never used alcoholic injections in trifacial neuralgia. Osmic acid injections sometimes prove effective, but as often fail. In obstinate trigeminal neuralgias medical treatment often fails and surgical procedures—section of the nerve—may remain the only resort.

You do not state whether you have to deal with an unremitting supraorbital neural-

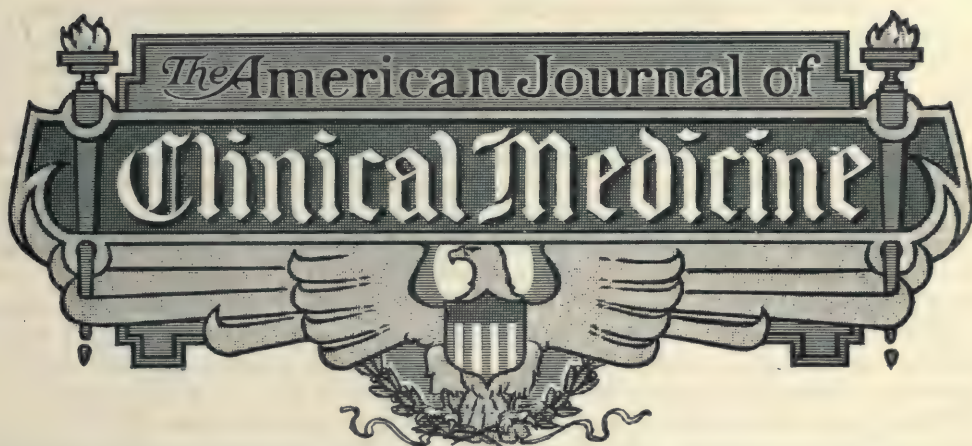
gia, reflex neuralgia, or tic douloureux. Supraorbital neuralgias may be constant or intermittent, or the attacks may appear periodically, treatment varying in each of these conditions. There is also a migrainoid type, which appears in adult patients in place of the migraine present in earlier life. Reflex neuralgia persists until the cause is removed, such as diseases of the teeth, changes in the alveolar processes, diseases of the mouth, swelling of the periosteum of the bony canal through which the nerve passes. In this type there is, as a rule, a constant jumping pain, although occasionally the paroxysmal attacks will simulate tic douloureux.

Tic is to be sharply distinguished from other neuralgias, as, for instance, that it begins almost always in middle or later life, and is characterized by pain, frequently starting in the upper lip or side of the nose, at times flashing upward along the nerve, or also radiating outward from a central point. The pain is of extreme severity, lasting usually a minute or two and disappearing as abruptly as it came.

During an attack the affected side of the patient's face is flushed, twitching of the muscles occurs, and there may be lacrimation, salivation, and discharge of serum from the nose. If, as we believe, tic is due to degenerative changes in the gasserian ganglion, the latter should be extirpated, in which case the peripheral operation may be tried first.

Aconiine and gelseminine pushed to physiologic effect have given the best results in our hands. Lecithin and calx iodata should be taken for several weeks, while a morning dose of castor oil should also be ordered. During this treatment the galvanic current may be applied with advantage. If such procedures do not avail, operation should be urged, though a great deal depends, in arriving at a decision, upon the age and systemic condition of the affected individual.

We cannot in any way endorse alcohol injections and do not believe that experienced physicians anywhere recommend the procedure.



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No. 5

To the Young Doctor

THIS number of CLINICAL MEDICINE will be read by many men who are just being graduated from the medical colleges of this country. We welcome them—*you*—into the greater “school of hard knocks.”

The field which you are entering is a crowded one. In this country there is an average of one physician to every six hundred people, and this, according to President Pritchett of the Carnegie Foundation, means three times as many doctors as the country needs. Yet, in spite of the higher quality of preliminary education now required, the lengthening courses of professional instruction, and the restrictions placed upon candidates by our state boards of medical examiners, the proportion of physicians to population is increasing instead of diminishing.

Yet there is no reason why the young doctor should be discouraged. Competition is the law of life, and here as in anything else “the best man wins.” You have a better preparation for the practice of medicine than we older fellows had when we left college ten, twenty or forty years ago. Many of you will have the added advantages of hospital experience, and while the first

few years may be expected to be years of struggle, in the long run, if you “stick,” the old guard must step aside and you will take their place.

Discouraged you are bound to be. In pursuing your profession you will tread no primrose path, and many of your number are bound to fall by the wayside, or stray into other more alluring callings. But if you “stay with it,” and are prepared to give the people what they want and what they need, you will make good.

What shall I do for the sick man? That is the great problem. The doctor who can solve it to the satisfaction of his patients is assured of success. The man who makes no attempt to solve it, who has little interest in it, no matter how fine his education may be, has little chance of getting on in the world as a practitioner of medicine. However great your interest in scientific problems, these alone will not afford a livelihood to one man in a hundred.

Mark Twain modified an old proverb into new form when he said: “Put all your eggs into one basket—and watch that basket.” Your business is to cure sick people. Keep that thought ever in your mind. Concentrate your energies upon it.

As a *practician* of medicine every other activity of your life should be subservient to this one. Medicine is an intensely practical profession. Never forget this.

Therefore, start right. Lay aside preconceived ideas about this disease or that drug. Study your patients as well as your books. Keep your brain-cells active in the search for new and practical ideas; yet do not despise the old. From this time you must stand on your own feet.

With this introduction we welcome you into our brotherhood. Come in and make yourself at home! Welcome also to the "Clinic family"—those who read and love CLINICAL MEDICINE, which exists only to be of service to you. Join with others in making your journal better. Read it closely, criticize it freely. Make it the receptacle for your own experiences. You are the man of tomorrow. We shall look to you.

The time to collect is when a patient realizes his need, not when a doctor needs to realize.—"American Medicine."

BYRON ROBINSON

It is with profound regret that we announce the death, on March 23 last, of Dr. Byron Robinson of Chicago, from disease of the kidney. He was only 53 years of age.

For many years Dr. Robinson was a frequent contributor to these pages. We published some of his books. Our readers all feel, I am sure, that they know him intimately, for few men have contributed so voluminously to the literature of our profession. He did a vast amount of original research work, more I believe than any other contemporary physician, and it was begun at a period when it was not popular nor appreciated. To Dr. Robinson it was a passion. It absorbed all the time that he could spare (yes, more than he could spare) from the practice of his profession, and it involved the outlay of thousands of dollars. The dissecting room was no charnel-house for him; it was a work-room which he entered with joy and left with regret.

Dr. Robinson was the author of two volumes on intestinal surgery and four on gynecologic subjects. His "Abdominal Brain" is a classic, and I believe in the test of time will remain one. The little volume, "The Vagina and Perineum," which we published, is one of the most practical works of its kind. All of his books are filled with original thought and enriched by patient investigation. I remember that the last time I met Dr. Robinson he told me with some pride of the increasing number of his anatomical discoveries which had received recognition in Gray's "Anatomy."

Shortly before his death Dr. Robinson presented his splendid medical library to the University of Wisconsin, his *alma mater*. He was preparing for the end, like the brave, thoughtful man that he was. He will be remembered and his work will live.

PROFESSIONAL PUERILITY

Djever stub your toe? Yes, and how you did cuss the darned stone. But the dornick lay exactly where it was, and never said a word.

Molly had a new hat and expected to go to church Easter morning; and behold how the rain poured down. Molly gazed out and energetically muttered the feminine substitute for swearwords. And the rain came down from heaven and fell alike on the just and the unjust, freshening the air and awaking to activity the dormant powers of Nature, completing the grand cycle on which depends the continuance of animate life.

The driver overslept, hurried his horses out before they had finished their feed, and the overloaded truck stuck in a mudhole. How the man did swear and abuse his beasts!

The Trust magnate concentrated his whole forces on his scheme, labored all day and far into the night, snatched food when and where he could, kept awake with coffee, secured sleep with morphine, and worked on whisky; and one day he fell in a uremic spasm. And the night succeeded the day, and the summer alternated with the winter,

and the sun that had pierced the clouds, of the carboniferous epoch sailed across the sky, while he lay on his bed and cursed the universe.

Worse yet, and still more childish—Doctors Alpha, Zeta, *et al.*, plunge their hands into the grab-bag and clutch a handful of medicines, fling them at the patient, and because the result of medication with uncertain and doubtful remedies must be uncertain and doubtful, they cuss the drugs.

The boy who hammers his thumb and viciously kicks the hammer is excusable—he is only a boy.

In every form of matter there are certain inherent qualities. To ascertain these and so manage them as to make them useful constitutes Civilization. So we cultivate the soil and improve food-plants; we wrest from ores the metals; we harness the powers of nature to our car; we apply our knowledge and intelligence to everything that may be made useful to us—excepting drugs. These we condemn unreservedly because we are too ignorant and too awkward to apply them successfully.

The question in a near-syllogism:

Drugs are substances that exert some influence over the functions of the human body.

Disease presents disorder of the bodily functions.

Apply the remedy that exactly restores the affected function to normal activity and the disease ceases.

The gist of the matter lies in knowing exactly the disorder and the remedy that exactly obviates it, and applying the remedy with exactitude. What else is the practice of medicine?

Exactness is the key to the situation.

"Aha! Now we've got you! What remedy will you give to cure cirrhosis of the liver and build new cells?"

None. We are only men, not gods. The difficulty is that you come in too late, and what you call the disease is only the end-process of a long series, "the ashes of a burnt-out fire." You should have commenced long before, when there was as yet simply a disorder of the hepatic function

without material lesions, and if you had stopped the malady then there would never have been any cells lost.

The trouble is that you have not been practising medicine but pathology. Your studies have been in the dead-house instead of the sick-chamber; in printed books rather than in the book of Nature. You are unable for this reason to detect the beginnings of disease, when as yet a cure is possible. You stand with the chemist who stops with inorganic chemistry and balks at organic. You may be able to state the chemical constituents of wood, but any woman who loves flowers will beat you out of your boots raising them, even though she may not be able to read or write. Possibly this may apply to the attendance on the sick. Are you *sure* it doesn't?

"Yes, but when you select one alkaloid out of a plant you lose the rest. There are other values in it that are wasted."

How men cling to superstition and mystery. How hard it is to come out into the light of day, to plant the feet on the firm ground of knowledge. There are other values in the plant—very well; get them out and let us examine them, try them out, ascertain their actions and uses and apply them intelligently.

The reason this is not done is the Power of the Rut. Men have been accustomed to administer a drug, and somehow the patient gets well. Just how or why they do not know—but he gets well, and there they stop. And so for ages hyoscyne was muffled in henbane, and arbutin strangled by tannin, and gelseminine enveloped in jasmine, and men timorously "tried" these and other drugs, ready at the first evidence of danger to stop and "try" something else—and they thought they were practising medicine!

The more carefully we study disease in the sick-room, in the living patient, the earlier we must learn to recognize diseases and the more effective will be our treatment as we apply at an earlier period the exact remedies that will correct the evils. These truths are axiomatic; they are not debatable. The facts and the deductions can not be

questioned. One argument remains—the appeal to prejudice.

"You are teaching eclecticism—the doctrine of specific diagnosis and specific medication!"

Are we men, scientific seekers after truth, earnestly, conscientiously endeavoring to fulfil the obligations of our noble profession and learn the best means of relieving the suffering and curing the sick? Or are we a pack of undisciplined brats, each crying vociferously, "I won't play unless I can be IT?"

"Let me know what goes on in a doctor's private office, and I will tell you if he is ethical. Let me know the business side of his practice, and I will tell you if he is honest. Let me see his diagnosis cards, and I will tell you if he is a sincere student of medical science. Let me see his treatment record, and I will tell you if he is a skillful practitioner."—"Doctor Betterman," in "The Office Practitioner."

THE VALUE OF THERAPEUTICS

In *The Washington Medical Annals* Roy discusses the value of therapeutics. He finds in current medical literature indications of a tide toward pharmacology. "A textbook on the practice of medicine that does not give a comprehensive therapy is a danger, if not a disgrace, to medical science. All great writers on medical practice have appreciated the importance of therapeutics." He quotes Latham and Sawyer to this effect, and adds, "There is no 'nux vomica and hope' about these statements. Names like typhoid fever and pneumonia seem necessary for classification, but how poorly they express the pathology!"

The three methods by which we determine the value of remedies are the clinical, the physiologic, and what we learn through the laws of physical chemistry of drug-action. Clinical experience is the means by which we verify the other two.

Niemeyer, a master of observation, wrote: "Digitalis in pure uncomplicated hypertrophy is unsuitable." Walshe said: "Of its danger in cases of mitral and tricuspid difficulty I entertain no doubt." Sawyer, whose clinical knowledge has been strengthened by a knowledge of the physiologic action

of digitalis, says: "I give digitalis when the veins and arteries point to its use, namely, when the veins are too full and the arteries not full enough, and the pulse is soft." Dr. Roy employs this illustration to show the value of the physiologic method in therapeutics.

The ionic method is based on the ionic, or electric, relation of drugs to the living tissues. Myers and Overton concluded that ether and chloroform narcosis were due to a union between the lecithin of the central nerve-cells and the volatile anesthetic, which destroyed temporarily the physiologic action of the central nerve-cells. Nerking produced complete anesthesia in animals and then injected lecithin into the blood. They almost immediately regained consciousness. Biltz studied the action of ferric hydrate as an antidote for arsenic. He found colloid iron was electropositive and arsenic electronegative. The union robbed arsenic of all toxic affinities for the tissues.

Pauli applied electrochemistry in his study of sodium sulphocyanide. He found the positive ions prevented the negative ions from precipitating protein, in this respect resembling the ion relation of sodium bromide and sodium iodide to protein. Sodium sulphocyanide was alternative and sedative. Testing this remedy clinically, he obtained from it excellent results in insomnia, arteriosclerosis, syphilitic headache, nervous disturbances of the menopause and the menses, also in neurasthenia. Roy finds the sulphocyanides particularly useful in the nervousness of the menopause and the monthly periods, also in lowering blood pressure. A case of insomnia of several months' standing was cured by it in two weeks. He also reports good results in neurasthenia.

Reicher is using cholesterin in pernicious anemia, while Ehrlich is using a special form of arsenic for the trypanosomes of sleeping sickness. T. C. Smith reports the citrate of iron and quinine his greatest aid in treating eczema in children.

Dr. Roy traces therapeutic skepticism to imperfection in the college instruction. He gives some interesting data in regard to his

experience in endeavoring to procure active digitalis. The druggist to whom he wrote for digitalis from assayed leaves stated that he had never been required before to use them. He was then told to use English leaves even if not assayed, but he had none. Other drugs found clinically inert as received from the druggist were cannabis indica, hyoscyamus, strophanthus, belladonna and physostigma; and "the sodium salicylate output in his prescriptions would make a dog sick." These things were found in Washington, D. C., the home of Dr. H. W. Wiley.

Dr. Roy takes the celebrated Council to task for recommending to physicians a "viburnum compound." The questions asked on therapeutics by some medical examining boards are neither scientific nor practical. He concludes as follows:

"I believe that therapeutics has a bright future before it. The works on the practice of medicine which only give diagnosis, pathology and therapeutic dabs will not endure. Physical chemistry, with its endless possibilities, has come to the aid of the clinical method and the physiological testing of drugs."

Two hundred years ago they said that the king could do no harm—and now they are making the same mistake about the majority.—"The Silent Partner."

ANTI-DISPENSING LEGISLATION IN THE OPEN

N. A. R. D. Notes comes out with a reply to our first "Miscellaneous" article of last month, entitled, "Trouble Ahead for the Dispensing Doctor." Naturally enough *Notes* sees "nothing wrong" with the Cullom bill and thinks that "no 'get together' physician who is willing to work with the pharmacist on a 'give and take' platform will find fault with it." If the "get together" (whatever that may be) has at heart the interests of his profession and his patients he certainly will object most strenuously, just as *Notes* would object, and vociferously too, if we should propose that every pharmacist who "pushed" any of the "57 different varieties" of A. D. S. specifics for all human ailments,

from falling hair to ingrowing toe-nails, should be subject to a fine of from \$500 to \$5000 or imprisonment for from one to five years.

How about it, Brother Carr? You object (theoretically) to the prescribing pharmacist; do you also take exception to his *pushing* (that's different, of course!) "pelvitone" and "kidney remedy", and other "A. D. S." preparations? You purpose to drive the dispensing doctor to the tall timber, and get a "corner" on all the patent-medicine business, through the "Syndicate," at the same time. Isn't this rather a "large order"—and what particular benefit does the doctor get out of it all?

With one thing that *Notes* says we heartily agree (though not with its English): "Truth and right are no respecter of persons or interests." Why lug in a moral precept unless you are sure that it applies? You want to stop the doctor from dispensing because you hope that this will increase your business. Isn't this the principal reason? Honest, now!

The rule that should determine the physician in making the decision as to whether he shall dispense or prescribe is the patient's welfare. Whenever he believes that he can render better service by prescribing he certainly should prescribe; if experience shows him the contrary he should dispense. That's what "truth" and "right" will tell any man of common sense.

We have no quarrel with the druggist. He is the man to do the mixing and the compounding of drugs, when these things are to be done, and we have frequently advised our readers to establish good relations with him, and employ his services. He can and should be the dispensing doctor's source of supply for many things. This "get together" program would have much more of the right kind of spirit in it if there were more effort at mutual service, less talk of the legislative sand-bag, which is to be depended upon to fill somebody's pockets.

These proposed antidispensing laws are class legislation of the grossest character, and, in their tendency to hamper the phy-

sician in his practice, subversive of the highest interests of humanity.

Let those who have failed take courage,
 Though the enemy seem to have won,
 Though his rank be strong, if he be in the wrong,
 The battle is not yet done.
 For sure as the morning follows
 The darkest hour of night,
 No question is ever settled
 Until it is settled right.

—Ella Wheeler Wilcox.

HARD-HITTING JOURNALISM

I always read W. J. Robinson's editorials. There is something in his style that reminds me of Roosevelt; also, something similar in the minds and methods of the two men. When Robinson has a thing to say he says it, without adjective trimmings, without apology for his opinions, and absolutely without fear as to consequences.

There is no "winding up" by way of introduction, no rhetorical climax. The typical Robinson editorial is a blow, right from the shoulder, always powerful, sometimes almost brutal in its forcefulness, but inevitably for the right, as Robinson sees it. There is no more strenuous force in medical journalism today than this many-minded man of *The Critic and Guide*, *Therapeutic Medicine*, *The American Journal of Urology*, and *The Medical Review of Reviews*. How can he cover all this ground and do everything so well?

Do you realize that Robinson has purchased, and is now editing and publishing, *The Medical Review of Reviews*? This has long been an excellent journal, but under the Robinson regime it has taken on new vitality. It is alive from cover to cover. The editorials are filled with fight and fire—and there are enough of them. There is not a dull page in the whole magazine; and yet it's "scientific" from beginning to end. There is something magnetic about it. A "live" man simply cannot pick it up without being attracted; cannot read it with indifference.

While there are many good medical journals—and they are really getting more

common—there is only one other that has an appeal equal to the revived *Review*. Modesty compels me to withhold its name!

A STORY EVERY DOCTOR SHOULD PONDER OVER

Mr. Charles H. Goddard, secretary and moving spirit in the American Druggists' Syndicate, has recently sent out a little booklet to members of the medical profession, inviting them to purchase stock in the Syndicate, the remarkable growth and wonderful profit-possibilities of which are pointed out in a very attractive way.

In this booklet Mr. Goddard tells the following story:

"We recall an instance in a small town where a physician persisted in dispensing his own medicines, although there were two excellent prescription drugstores in the place. The druggist tried to show the physician that he was making a mistake in not sending his prescriptions to them to be filled, but he was stubborn and defiant, saying he would dispense as he pleased and he would like to see what they could do about it.

"The druggists held a conference and soon decided what they would do to teach the physician a lesson.

"They employed a bright and competent young physician to write free prescriptions and make free professional calls. It took only about three weeks to convince the first doctor on the ground that he would soon be starved out of the field if he did not make peace with the druggists. He went to them, acknowledged his error, promised to quit dispensing if they would cease their free-prescription policy, and they met him halfway. Today both the doctors and druggists are making a good living in that town. This is intended only as an illustration of what could be done by pharmacists in extreme cases, if they found it necessary, as it was in this instance."

How do you like it, Doctor? Think it over. We have no comments to offer. Same "Syndicate" that has gone, "whole-sale," into the patent-medicine business

and now proposes to teach the dispensing doctor ethics.

CONCERNING OLD MEDICAL BOOKS

The Lancet-Clinic (Cincinnati) for January 8, page 32, has this to say on old medical books: "A factor which must be considered is the fallacious notion prevalent among physicians that only recent books on medicine are valuable, and that all recent books are filled with novelties that are useful. Nevertheless, many of the best medical books are twenty years old, and a few that every student and physician should read are older still. The great mass of material to be found in the library of a prosperous physician who has liberally attached his name to subscription blanks (*viz.*, for new publications!) is trash of the most useless and worthless sort."

The apparent contradiction contained in this assertion is very easily cleared up if we keep in mind that the editor of *The Lancet-Clinic* condemns as trash and worthless a good part of the latest medical literature, many of the books, in sad truth, consisting merely of write-ups and rehashes from older works on the same subjects.

It is indeed true that many of the best medical books are twenty years old, and older. We would only call to mind Prof. von Ziemssen's "Cyclopedia of the Practice of Medicine," which, in the German original, was published in the seventies of the last century and which, except for the additions made necessary by later discoveries, is still as much an authority on the subjects covered as it was then. Who would deny the classical nature and lasting value of such works as Billroth's "Surgical Pathology," DaCosta's "Medical Diagnosis," Ziegler's "Pathology," and a host of other books which were authorities many years ago and are authorities still?

And that reminds us: A great many physicians read their weekly and monthly medical journals only very cursorily and at the end of the year send them to the attic, if not to the furnace. Can there be a greater mistake? Current medical litera-

ture—of the appropriate kind, *nota bene*—embodies the medical history of our own times, and it is from it that the textbooks are written. The latter cannot possibly work up all the valuable material contained in the many papers which are presented in journals, and this is lost to a great extent unless carefully read and made available for future reference by a proper index.

But to come back to old medical books, we maintain with *The Lancet-Clinic* that these same are by no means junk, and to be discarded. They are much rather a valuable source of information which the knowing ones among physicians make constant use of. While not much good can be said of many textbooks, unfortunately, which are ephemeral at best, still there are many indeed which are well worth preserving and studying over and over again.

"Many doctors of high rank are constant financial bamboozlers. Every move is a grand-stand play. Every case is a serious case. 'The call came in the nick of time.' Death flew out the back door as the Great Doctor entered the front. Every sore-throat is diphtheria; every belly-ache is appendicitis; every infected finger is blood-poison."—"Doctor Betterman," in "The Office Practitioner."

TO ERR IS HUMAN

At his clinic, one day, Nicholas Senn called several of the students down to the floor to make a diagnosis. One of them gave his opinion. Senn remarked that the diagnosis did not agree with that he himself had made, and then boomed out in his deepest tones: "The boy is right!"

Yes, but that was Senn.

Unfortunately, there are not many Senns, men big enough to do such an act of justice. It was a word that will send a thrill of pride, love and devotion through that boy's heart long after his hair has whitened and his boys have boys of their own.

How many of those who witnessed the scene carried away from it a remembrance that will embolden them to tell the truth and do justice to their fellows, even if it appears to be a detriment to themselves?

But why should it? Who among us dare lay claim to omniscience, to absolute in-

capability of error? When we are very young we feel that we must be always right; we resent the imputation of error, are wounded if our spelling or pronunciation of a word is criticized, and hate the fellow who corrected us. Advancing years bring a lowlier estimate of ourselves, and we are happy to line up with the average, rather pleased to be pronounced "not so worse." In fact, we begin to be rational when we "come down off our perch;" and the man who never does come down is an insufferable prig who is despised by everybody.

"To know thyself is the beginning of wisdom," said the ancient philosopher; and Kipling's hero "finds himself" when he realizes that he is a fool.

Emerson said: "A foolish consistency is the bugbear of little minds." How true it is. How certainly it stamps littleness on the man if he cannot come out manfully and say, "I was mistaken!" I once recommended a doctor to a friend. He looked at me with surprise and asked, "Do you consider *him* the most skilful doctor in town?" I replied: "No, but if he does not know he will tell you so, and give you a chance. The others won't." The man lived to the age of ninety-eight under that doctor's care.

Just now I am vastly amused at the squirming of some people who took sides in a controversy with all their might and now are trying to take it all back and line up on the right side and yet save their face. Some will not admit their mistake but still insist that the horse *was* sixteen feet high!

How easy it is to come out frankly and say, "I was mistaken. It was not my first mistake, and please God, I hope to live long enough to make plenty more." And you give him the grip of true appreciation and turn away feeling, "There's a *man*, all right."

Now, I'm not so big; in truth I am not near as big or as important as some folks think me; but I surely have learned the lesson of humility. A man came to me the other day and said he had detected an error in my work. He evidently expected it would be taken as the gage for battle, and

was ready to defend his position. I said to him: "Is that the worst error you have found in my work? Gee! I know of a hundred worse ones."

We parted with mutual liking and respect.

The Indian says that when a man kills a foe the strength of the slain enemy passes into the visitor's arm. In the weird fancy lies the truth. Each defeat leaves us weaker for the next battle, but each conquest makes us stronger. Nothing makes a prison to a human life but a defeated, broken spirit. The bird in its cage that sings all the while is not a captive.—J. R. Miller.

SOME THOUGHTS ON THE ROLE OF THE PHYSICIAN

I have no sympathy with those who limit the physician to a benevolent neutrality, making of him a mere spectator. Disease is a war in which it is the duty of the physician to come to the aid of nature. Few patients today have that surplus force that permits us to abandon them to themselves, and very few can afford the debility occasioned by loss of blood and too strict diet.

Take any acute inflammation; it is urgently necessary to cut the access and prevent its return. For even a simple inflammation has its access. By the fact of its violence it debilitates the vessels, paralyzes their coats, and from being hypersthenic soon becomes hyposthenic, the most dangerous form. Then, if one does not immediately give the indicated remedies in suitable doses, the gravest disorders are produced, which are attributed to the malady but which could have been prevented by appropriate treatment. The fact of illness contributes an indication for supportive treatment, since it shows that the vital powers were insufficient to resist the onslaught of disease.

Experience has demonstrated that the prescription of digitalin, aconitine and veratrine, when there is a marked exaggeration of pulse and temperature, acts marvelously while there is too marked a difference. Likewise strychnine is indicated when there is depression. Liquid medicines are only to be used as excipients or adjuvants. It is better not to mix active principles with liquids in stock, lest they may become en-

feebled or decomposed. Make your solutions at the bedside, to last till the next visit only.

The granule form is incontestably the most favorable for the preservation and portation of drugs. These may be administered dissolved in a teaspoonful of any agreeable liquid. The patient does not then dread the approach of the hour for taking medicine, and it is easier for the physician to follow the course of its activity.

Digestion is impaired or suppressed by acute disease, the organic activities being concentrated at the focus of the malady. The first stage of acute attacks having passed, the gastric atony must be relieved. The condition denoted by a coated tongue is removed by a dose of a laxative saline, and the stomach then usually resumes its functions. If not, we come to its aid with quassin, of which a small dose should be given in solution (water alone) before each meal. If the large bowel is impacted we have recourse to jalapin. On the reestablishment of the gastrointestinal functions depends convalescence, whether it will prove to be brief or prolonged.

Another question is as to sleep. Generally it is not well that the patient should doze by day, unless after prolonged insomnia. This cerebral flagging should be relieved by caffeine. Give a milligram of caffeine valerianate every quarter hour until he is wide awake. To secure repose at night, Burggraave suggested that one may give near the end of the day a few milligrams of morphine. It is rare that this dose does not suffice. The patient passes a tranquil night and awakes with forces recuperated. The salts of opium do not present the inconvenience of the parent drug. If more was needed he was accustomed to add chloral. Beginning at 6 in the evening, he taught that we might give 3 or 4 milligrams of morphine every hour; if not asleep by 9 o'clock, to add a gram of chloral. As soon as the patient is up, and taking food and exercise, he needs no hypnotic. The dangers of morphine were not appreciated by Burggraave, because he employed minute doses, and the habit had not received much attention when he began his work.

We demand much more careful and scientific treatment of insomnia now. If this is due to cerebral anemia, a cup of hot bouillon will induce sleep; or caffeine valerianate, a milligram every quarter hour, will meet this indication and aid the elimination of toxins. Nervous apprehension is dissipated by hyoscine if 1-10 milligram is given every half hour until "just enough" is taken. Pain and fever are best met by gelseminine, half a milligram every quarter hour; and this dissipates cerebral hyperemia. Solanine amply fills the place of the bromides, while spinal irritation and sexual activity are soothed by this or by cicutine hybromide, the dose of either being a milligram every half hour.

Thus it will be seen that, as with alcohol, every possible application of opiates may be replaced by one or other of the alkaloids, and that the latter will fill the need better, although no one of them will do so many things as does morphine.

Many maladies are prolonged by hunger. Let the patient eat if the tongue is clean and the breath pure. Nothing is worse than purgation during convalescence; the morning saline suffices. The selection of food is one of the occasions where the knowledge of the master is requisite.

Convalescents should not respire the same air as the sick. The patient should have a day-room and another for the night. Pure air is the food of life. As soon as the doctor leaves, the friends close the windows to shut out drafts. Better catch cold than be poisoned. The best way to avoid drafts is to open the windows wide. Go back into the room a few minutes after having said good-by; if the windows are all shut again, take out a sash and carry it home with you. That may make people realize your wishes.

PELLAGRA A DIATHESIS DUE TO THE ABSORPTION OF RANCID FAT

In *The Charlotte Medical Journal* for December, 1909, and for January, 1910, Dr. C. S. Pixley of Winnsboro, North Carolina, publishes the results of his interesting

studies on pellagra, which have led him to the conclusion that this condition is dependent upon the frequent and long-continued ingestion of rancid or infected fat; or also of fat which may have become rancid or infected *after* entering the stomach. From clinical data Dr. Pixley assumes that the symptoms depend upon the variety of microbes present which will flourish in the body-solids and fluids of a lowered alkalinity.

This hypothesis, the author claims, explains the distribution of the disease in many localities, among so many different classes of society, where the diet indeed is different, but the ignorant housewife or the careless servant permits the indefatigable houseflies to infect, with their feet, the butter and the lard. Dr. Pixley accuses the common housefly of being the active agent in spreading pellagra (by virtue of causing fats to turn rancid) as the mosquitoes do yellow fever and malaria, the rats and squirrels spread bubonic plague, dogs hog-cholera, and haired and furred pets diphtheria.

The author claims that the symptoms due to the absorption of rancid fats and their derivatives are those observed in pellagra; he has noted that pellagra patients avoid fat in their diet as being *a source of serious discomfort* (Italics ours.—ED.), and that some of them have learned to avoid corn also, for the same reason—a fact readily understood if we remember that a large percentage of corn is fat, sometimes approximately ten percent.

Rancid fat in the stomach leads to the formation of volatile fatty acids (principally butyric) which are not easily eliminated but saturate the body and must result in a general lessening of the alkalinity. The symptoms described by Dr. Lared (Brande and Taylor's "Chemistry," 1875) as following the experimental ingestion of butyric acid are those found in the early stages of pellagra. We expect to find a condition of reduced alkalinity, and that this actually does exist is shown by the fact that all these patients are free users of sodium bicarbonate, self-prescribed.

Dr. Pixley's studies have led him to assert the existence of a *pellagrous diathesis*, which

he defines as a condition of the organism in which all solids and fluids have been saturated with the volatile fatty acids. This condition will powerfully influence every later trouble, varying in its intensity from such active violence as to be the only apparent disease to modifications of other troubles, strong enough, when unrecognized, to defeat efforts for their cure. He has noticed this diathesis, among others, in two cases of intractable neuralgia of the fifth pair of nerves, both of which had been abandoned to the surgeons but yielded to treatment aided by "antipellagrous" measures.

His limited experience shows a pellagrous influence in troubles with the eye and ear, and he suggests that the specialists will do well to consider it most carefully. Alienists will find that this same influence may powerfully modify diseases coming within their department. As the other diatheses, or constitutional traits, when present, powerfully influence disease and treatment, so also, he thinks, will the pellagrous diathesis be found equally potent and far-reaching. The causes of the diathesis, besides hereditary influences, are listed as impure air, insufficient or improper food, defective sunlight, overwork, intemperance, and specific, tuberculous and malarial infection. This certainly, Dr. Pixley adds, includes "rancid fats," both animal and vegetable.

As for the treatment, Dr. Pixley very properly begins with a thorough cleaning out; podophyllin, juglandin, leptandrin, euonymin, or the laxative salines. This is followed up with the arsenites of copper and strychnine, the former to check decomposition; and with hyoscyamine to control intestinal pain. Then the sulphocarbolates are given, with other laxatives if necessary, until the digestive tract is as germ-free as it possibly can be made.

The diet must be free from hog-fat, hog-meat and corn. Shredded wheat, oatmeal, eggs, chicken, perfectly fresh buttermilk, and vegetables properly prepared are proper foods. If fat is needed, it is supplied in the form of oil inunctions. Alkaline baths give great comfort to the patient.

In the later stages as well as in chronic cases electric treatment may be of service, while, theoretically, arc-light baths will assist the blood to return to normal conditions.

"O powerful Goodness! bountiful Father! merciful Guide! Increase in me that wisdom which discovers my truest interest. Strengthen my resolutions to perform what that wisdom dictates. Accept my kind offices to thy other children as the only return in my power for thy continual favors to me."—Benjamin Franklin's prayer.

MODERN MIRACLES

Who says the day of miracles has passed! Before you rashly commit yourself in assenting to this proposition, get *The Sunday Telegram* of Worcester, Mass., and read the astounding statements at the top of the first page. From this we learn that Mrs. C. D. Sweet "has made one of the greatest cancer discoveries ever known." At least Mrs. Agnes Dubois says so, and who can doubt Mrs. Agnes Dubois' capability of judging of such matters. She knows, because Mrs. Sweet discovered two cancers in her, "One on the liver which was caused through gallstones, one in her intestines which was caused by constipation and piles." Moreover, Mrs. Sweet has in her office, in sixteen bottles, the cancer of the liver and the cancer of the intestines, which she is prepared to produce for the public to inspect at any time.

The miracle of it, however, lies in the fact that the cancers were removed and placed in the sixteen bottles without the use of drugs or operation. Just how she induced those cancers to leave the patient's body and enter the bottles is not stated; that is probably one of her secrets. Whether they came out *per vias naturales* or directly through the skin, but without operation, is not revealed. Besides this, Mrs. Dubois was relieved of 212 gallstones.

Another lady, whose testimony could not be doubted for a moment, states that Mrs. Sweet cured her paralysis by massage and the use of liniments, made by the latter lady. But since all cures are effected without the use of drugs, we have here another

miracle, i. e., the manufacture of liniments without drugs.

The same versatile lady cures little boys of attacks of insanity, and guarantees to break up any case of appendicitis without operation. Since the reports appear to show that massage is her principal weapon, one may imagine what happens when this accomplished lady gets hold of a case of real appendicitis. The lady's picture accompanies the advertisement, and is probably a good portrait. The face looks like that of a woman who would promise anything, try anything, without the slightest hindrance from a consciousness of her own ignorance, but with assurance enough to win the confidence of such feeble-minded individuals as the patients whose faces are also portrayed in the same advertisement.

Massachusetts ought to have laws to prevent such people preying upon the ignorant public.

The most significant thing in this, however, is the testimony it gives to the desire of very many people to obtain cures without resort to the knife or drugs. By drugs, of course, they mean the old sort, the old practice now fast becoming obsolete; and by the knife they mean the new method, the practice of submitting everything to operation. Against this practice a reaction is nearly due, similar to that which prompted Thomson's rebellion against the abuse of mercury and the depletant system in general. Nobody has any prejudice against drugs that "make good." It is the useless and injurious medication to which people object. The best way for the medical profession to head off this straying away to false and foolish gods and goddesses is to devote more time to the study of therapeutic means and methods which mean something practical.

INFLUENCE OF NARCOTICS ON PHAGOCYTOSIS

In *The Lancet* for February 26, Reynolds contributes an interesting paper upon the influence of narcotics on phagocytosis. He quotes the experiments of Cantacuzene,

who found that when guinea-pigs had been immunized against cholera, and opium was given; followed by a sublethal dose of cholera vibrios introduced into the peritoneum, in spite of vascular dilation diapedesis did not take place. The vibrios retained their form and motility and multiplied rapidly. As the effect of the opium passed off diapedesis began and in a short time large numbers of leukocytes appeared on the scene, which rapidly enveloped the vibrios.

The animal invariably died, in spite of the fact that no free vibrios were present in the exudate. On examining this it was found that some leukocytes, showing marked signs of degeneration, were literally stuffed with vibrios. These, although capable of enveloping the vibrios, were killed by the latter's toxins, and then served as a suitable medium in which the vibrios multiplied. This never took place unless the animal was under the influence of opium.

Reynolds' experiments showed that morphine not only checked diapedesis but diminished phagocytosis in a marked degree. The growth of bacteria was not appreciably affected by the morphine. He makes the following deductions:

"It is probable in most surgical operations a certain number of pathogenic organisms gain entrance to the wound, however carefully asepsis may be observed. The further history of the case turns on this point: Will the phagocytes be able to destroy these bacteria before the latter have multiplied sufficiently to gain the upper hand? If morphine temporarily paralyzes the activity of the phagocytes, if this drug be given, time is lost during which the bacteria multiply. When the narcosis passes off the phagocytes may be unable to destroy the bacteria on account of their number and the paralyzing effect of the toxins produced by them; in fact, by giving it, the chances of sepsis have been increased.

"Again, consider an acute infection such as pneumonia. From the onset we know that a certain number of pathogenic bacteria are present at the site of inflammation, and the progress of the disease will depend largely on their multiplication. At first,

when there is little secretion in the tubes and the cough is dry, it is common to give morphine. Here the phagocytes are placed *hors de combat* at a time when they should be particularly active. The bacteria steal a march when the phagocytes are asleep, they multiply, and the phagocytes recover from their lethargy to find their task infinitely greater than before.

"Lastly, take an early appendicitis with obscure symptoms, when palliative treatment is adopted. Textbooks recommend morphine to check peristalsis and quiet the patient, but not much, since it tends to mask the symptoms. It not only does this but it muzzles the phagocytes. When the latter recover their vitality, even though they be able to overcome the bacteria, the reaction is much greater than it would have been had the phagocytes been free to act from the first. More fluid is poured into the tissues of the inflamed appendix and the danger of strangulation and subsequent sloughing is so much the greater."

Instead, then, of administering morphine at the beginning of infectious maladies, thereby impairing the natural defensive forces of the organism, it would be wiser to seek to intensify these forces through increasing phagocytosis; and how better can this be done than by charging the patient's blood with a nuclein solution.

"Whatever the weather may be," says he,
 "Whatever the weather may be,
 It's the songs ye sing an' the smile ye wear,
 That's a makin' the sun shine everywhere."
 —James Whitcomb Riley.

THE CRUELTY OF CHRISTIAN SCIENCE

Unthinking people readily take up any proposition that has to them the virtue of novelty, and without much consideration adopt the tenets of the latest cult, and sedulously apply themselves to its propaganda.

Novelty! It is older than Christianity. It was hoary but not venerable when the lame slave indited those Fables the deathless wisdom of which has not been dimmed by thousands of years, and which are still

transmitted from generation to generation as crystallized gems of truth. When men prayed to Jupiter and piously looked to the gods of Olympus the story was told, with an accompaniment of common sense that seems curiously modern. What more perfect illustration could be given of the present-day craze than the story of the man who, having fallen into a pit, lay there calling on Hercules to help him out, until the god curtly told him to help himself?

No wonder the women take it up. There is an essentially feminine, and that means maternal, principle underlying the conception. To woman the cosmos is completed when her child lies in her arms, helpless, dependent on her for life, looking to her for the fulfilment of every want, she to divine these by maternal instinct and satisfy them before the infant is really conscious of their existence. The child finds in her the most devoted of slaves, and to many a child and many a mother this fundamental conception of their relation never ends. The child painfully learns to dissociate himself from this dependence, the mother still more painfully and most unwillingly. To her, therefore, the idea of lying down and letting the Deity do the worrying is harmonious with her deepest, holiest instincts.

Surely it is not a cult for Men!

Since the gospel of love has been made the pretext for the most horrible cruelties inflicted by man upon man, we need not wonder that this phase of maternalism has been so perverted as to render it, instead of the beneficent protection of the budding being, the means of withdrawing all the safeguards that modern knowledge and skill, the accumulated experiences of the race, have made available for the prolongation of these little lives. In irrational devotion to a cult whose priesthood rivals that of Moloch, the cries of anguish pass unheeded; the prayers of the child for relief fall on deaf ears, the maternal solicitude is submerged by a callous indifference for which history offers no example since its misty dawn. Dominated by the religious principle, the mother cast her firstborn into the flames, but she did not sit idly by while it choked

to death with croup; and when nature gave up the fight and the little limbs stiffened in death, coolly blame the death she might have prevented on the innocent's unbelief.

Paget sent letters to many physicians, asking for reports of cases in which harm had been done by the false trust in Christian science. He says:

"I got back a long list of killed and wounded; I wish it could be nailed to the doors of all our churches. I could only publish it, saying: 'To see the full iniquity of these cases the reader should be a doctor, or should go over them with a doctor. But everybody, doctor or not, can feel the cruelty, born of the fear of pain, in some of these scientists; the downright madness threatening not a few of them, and the appalling self-will.'

"They bully dying women and let babies die in pain; let cases of paralysis tumble about and hurt themselves; let appendicitis go on to septic peritonitis, gastric ulcer to perforation of the stomach, nephritis to uremic convulsions, and strangulated hernia to the *miserere me* of gangrene; watch, day after day, while a man or a woman slowly bleeds to death; compel them, who should be kept still, to take exercise; and withhold from all cases of cancer all hope of cure. To these works of the devil they bring their own deft, wilful and complete ignorance; and their "nursing" would be a farce if it were not a tragedy. Such is the way of Christian science, face to face, as she loves to be, with bad cases of organic disease.'

"I wrote that paragraph carefully, from notes of actual cases; I stick to every word of it; and I hope that all who know of similar cases will communicate with me, so that I may add them to my list.

"Seeing the gross and shameful malpractices of Christian science, the long trail of pain and of death that she leaves behind her, her impudent concealment of all her failures and worse than failures, her notion that all diseases alike are mental and none of them in reality there; her mad resolve never to examine a case, or read a medical book, or look at a specimen, or take a tem-

perature, or auscultate a chest, or use a microscope, or acknowledge any difference between ordinary backache and spinal caries, between functional paralysis and organic paralysis, between indigestion and carcinoma of the stomach, between pain in the breast and cancer of the breast; her frequent cruelty, especially to small children; and her brutal way of saying that her patients die for want of understanding what she tells them—seeing all these abominations, we ought to prevent even the faintest shadow of them from falling across our church.”

Ideals are like stars; you will not succeed in touching them with your hands, but like the sea-faring man on the desert of waters, you choose them as your guides, and, following them, you reach your destiny.—Carl Schurz.

THE ROLE OF THE PHYSICIAN

Most arduous and difficult is the task of the physician at the bedside of the patient. What is the doctor's true object? Evidently, to discover the cause of the patient's illness. But how?

To establish the pathogeny the doctor has recourse to physical examination and to the study of symptoms. The diagnosis is an essential, yet difficult to establish; nevertheless every means must be taken to arrive at it, or a doubtful judgment may result in a false treatment. Certainty must rest on a study of the symptoms; these nearly always declare themselves during the primary days of the malady, but during these the disease may make great progress and commit irreparable ravages. Hence, contrary to the principles of the expectant school, arises the necessity of energetically attacking the morbid principle at the start, as represented by the fever. For when we have succeeded in quelling the fever, we have secured the mastery over the malady.

The expectant one, called to an acute case, examines the patient, recognizes—or

usually doesn't, since as a rule he waits—a febrile temperature, dry skin, etc. He prescribes placebos, crosses his arms and—waits! If he has found the patient in an alarming condition he invokes the saints, covers the sufferer with revulsives, and administers impossible mixtures that fatigue instead of solacing him. Meanwhile the disease runs its course and augments the anxiety and the torments of the patient, even if it does not imperil his life. Yet how easy it is, instead of contemplating the unhappy patient with folded arms, to exert oneself energetically and combat the morbid processes before they have grown into unremediable conditions.

The expectant prescriber, besides his ignorance of the effects of the medicaments he prescribes in antique formulas, is ever pursued by remorse for not having known how to act in time.

The active-principle user, on the other hand, also observes the patient, follows step by step the phases of the malady, and immediately combats the initial symptom of fever, then the secondary symptoms as they declare themselves. Hence come immense advantages to the patient and that sense of satisfaction to the physician for having done his duty and proved himself useful to his kind.

Well may Burggraeve predict that posterity will find it astonishing that things so simple should take so long a time to win acceptance.

Cure! CURE! Messrs. Doctors, if you would merit this honorable title. To what good are all your fine theories on fevers and pneumonias if with a few granules of quinine hydroferrocyanide, strychnine, aconitine, veratrine, digitalin, and phosphoric acid one can anticipate or cure these maladies?

“Skepticism should not serve as a cloak for ignorance, nor as an excuse for inattention and neglect.” (Tabourin.)





A Talk With the Young Graduate

Cheerful Advice for the Embryo Doctor

By **GEORGE F. BUTLER, A. M., M. D., Chicago, Illinois**

Professor of Therapeutics and Head of the Therapeutic Department,
Chicago College of Medicine and Surgery

I AM glad that I am a doctor, and glad that I have this opportunity of addressing, through the columns of **THE AMERICAN JOURNAL OF CLINICAL MEDICINE**, medical students about to go out into the world as practising physicians.

Medical men are to be envied; if they cure, their patients are loud in their praise, but if they do not, they preserve a dead silence—which reminds me of what my preceptor told me when I first entered a medical college:

"I have always remembered my first patient," he said to me.

"I trust he remembered you," said I, thinking of the large income I would soon have.

"He would have done so, no doubt," said the doctor, "but he hadn't time to make a will."

The large income I expected didn't materialize as rapidly as I anticipated, after beginning practice, and I prayed many times that my father-in-law, who was backing me, would have *remittent* fever.

In all seriousness I wish to congratulate you upon the life-work you have undertaken. As members of the medical profession you will by no means be the poor relation of any professional family.

The public cannot be expected to estimate us by any other measure than that of

our usefulness. It is all very well for a patient to feel that his medical man is carefully trained in physical examination, and capable of constructing a skilful diagnosis; but the essential thing after all is confidence in his power to aid him when stricken and prostrated by disease or accident. The latter is our actual business and occupation in life; and it is here that success is most to be desired.

In our efforts, however, to cure disease, we must not overdo it. We must not drug our patients to death. On the other hand, don't be so scientific that all your patients will die "cured." I once had an ultra-scientific accomplice, otherwise a consultant, in a case, and I differed with him regarding the diagnosis; with a great show of confidence in himself he said: "I disagree with you, Doctor, and the autopsy will show that I am right."

It did, and ever since that I have allowed no patient to die on my hands, for when I find a man is going to die, I call in a specialist.

Speaking of specialists, reminds me to caution you against the idea of being a specialist as soon as you enter practice. Do not seek the specialty, let the specialty seek you. There should be no specialists in medicine save in departments requiring such marked dexterity as can be acquired and

retained by extensive and constant practice. If after years of study and reflection your inclination, your peculiar fitness for the task, or your wide experience in some chosen field of investigation warrant the attempt, then and not till then can you properly limit your studies to those of the specialist.

Be a Good General Practician

Let your ambition be to be a good general practician. He is usually the most broad-minded. It belongs to the office of the family physician to know fully the medical history of the family; to keep himself constantly informed as to the physical condition of each member; to advise as to the education, choice of occupation, residence, and whatever else may have an influence, present or prospective, upon the conditions of health. The family physician is the one who can take in the whole picture of the case, and is not so apt to be prejudiced and narrow, and he usually possesses more tact. He cannot fail to become every year more useful and more honored, until he shall stand first among the secular influences which promote the welfare of the race. The man who enters a specialty immediately after he is graduated may resemble a locomotive, grand and powerful when following the narrow railway—his specialty—but off the track a helpless, inert mass of iron.

A man who stuttered went to a throat specialist about his affliction. The specialist asked, "Do you stutter all the time?" "N-n-n-no," replied the sufferer; "I s-s-s-stut-t-t-ter only when I t-t-t-talk."

I know of a case where a heart specialist was called to see a guest in a prominent hotel in this city. The patient had a pulse of twenty-five, and the doctor got rattled and said the man would die before morning.

A good old general practitioner was called in consultation, strange to say. He looked over the man carefully, and then inquired, "Where do you live?"

"Philadelphia," slowly gasped the patient.

"Oh, that clears up the case wonderfully," said the old doctor, "you remain in

Chicago a week and your heart'll beat fast enough."

This sort of common sense is well illustrated by the case of Colonel Blood of Kentucky, who was very ill. The old doctor called one morning and inquired, "How did your husband pass the night, Mrs. Blood?"

"He seemed quite comfortable, sir, and asked for water several times."

"Whereupon the doctor-looking grave and remarked, 'H'm—still flighty.'"

Serve Humanity—Also Yourself

You go from your college, equipped to do service to humanity, and indirectly to yourselves. Let it never be said of you that your highest ambition implies the reverse of this statement, or that you suffer the shadows of your own personality to obscure the clearer light of professional duty and the nobler impulses which should actuate those who aspire to treat the sick. Some of you, doubtless, will attain success and fortune; a few will become preeminent; a large number must contemplate bravely the level to which members of all professions are eventually assigned—a dull, sometimes chilling struggle, to be met with calmness, courage, and untiring industry. Be not dismayed by the vicissitudes and disappointments of your high calling; remember "King Henry IV.:"

"Yield not thy neck
To fortune's yoke, but let thy dauntless mind
Still ride in triumph over all mischance."

Every young man, beginning life in earnest, naturally feels discouraged at times; but, if he is made of the right kind of stuff, he will fight off the feeling and work and wait.

No one is ever beaten unless he is discouraged. The man who can be easily discouraged, or turned aside from his purpose, the man who has no iron in his blood, will never win.

You will have to make your own path in the practice of medicine. You must play the game alone.

No man ever sailed over exactly the same route that another sailed over before him; every man who starts on the ocean of life arches his sails to an untried breeze. Like

Coleridge's mariner, "he is the first that ever burst into that lonely sea."

Don't Worry Because You Are Not a Genius in Medicine

We can not all be equally talented, but we can fill the place God intended us to fill. The crow is not the eagle, and no amount of sun-staring will make it one. It is no man's business whether he has genius or not; work he must, whatever he is, but quietly and steadily, and the natural and unforced results of such work will be always the things that God meant him to do, and will be his best. No agonies nor heart-rendings will enable him to do any better! If he be a great man, they will be great things; if he is a small man, small things; but always, if thus peacefully done, good and right; always, if restlessly and ambitiously done, false, hollow and despicable. The real work that is of substantial and lasting benefit to the community at large has to be done on a mediocre level. It is just as much to be a common soldier in the ranks as to be a general that leads. We cannot all be generals.

We may "hitch our wagon to a star", but every star is not a shooting one. A good ordinary road horse would answer the purpose better.

The demands of what may be considered a general talent are very great, and the majority of struggles, by force of circumstances, must necessarily be content to add to the common stock. If we gain nothing more than experience, it is generally paid-up stock for an emergency. All opportunity is the reward of watchfulness. Experience, no matter of what kind, if it is only weighty enough, is always good ballast in a storm. If it can take a bite on the wave, the rudder has a good purchase.

If you have great talents, industry will improve them, if you have but moderate abilities, industry will make them better. What men need is, not talent so much, but purpose; in other words, not the power to achieve, but the will to labor.

"It is not enough to know, we must apply; it is not enough to will, we must also

do", says Goethe; and Carlyle, in his cynical and vehement way, took it up and made it ring into the ears of his own generation with a passion of eloquence that reverberates yet.

"Produce! produce!" he cries, in "Sartor Resartus." "Were it but the pitifullest infinitesimal fraction of a product, produce it in God's name! 'Tis the utmost thou hast in thee: out with it then." Up, up! Whatsoever thy hand findeth to do, do it with thy whole might. Work while it is called Today, for the Night cometh wherein no man can work."

Don't hesitate! Pitch in!

Indecision becomes a disease, and procrastination is its forerunner. Those who chase that phantom deceiver, Tomorrow, never arrive anywhere, never come to anything but failure.

Unless you determine to achieve those things which are absolutely indispensable to success, and sacrifice all the little trifles which are nibbling away at your precious moments, you will accomplish nothing worthy of a great life.

Work, play, study—whatever it is, take hold at once, and finish it squarely; then to the next thing, without letting any moments drop between.

Tomorrow men never do anything. It is the today-men, the now-men, who accomplish the great things in the world.

Be Optimistic; Be Cheerful

Ordinary people think merely how they shall spend their time; a man of intellect tries to *use* it. To be a thoroughly successful doctor you must be optimistic. Educate the will-power so that it will focus the thoughts upon the bright side of things and upon objects which elevate the soul, and thus form a habit of happiness and goodness which will make you rich.

A doctor should be cheerful and possessed of humor. Humor is one of the most human of qualities, linking itself so closely with sympathy and pathos that you seldom find them separated. The fountains of laughter and tears lie very close together.

The person who carries a smiling countenance, keeping his troubles to himself, ever

finds a welcome. He makes a host of friends, and impresses others with the belief that he must be successful in order to be so cheerful. This fact inspires confidence, and he consequently makes his way in the world where another, with more brains but less buoyancy, fails.

The Smile's Worth While

Laughter is contagious; often the presence of one jovial spirit will affect a whole company. Invalids are always helped by a call from a smiling, hopeful doctor. Dr. Oliver Wendell Holmes said: "A smile may be worth five thousand dollars a year to a man." It is often worth that much to a doctor, and is of incalculable value often to a despondent patient.

Cheerfulness is a never-failing source of influence. It is a nerve tonic and stimulant. It cheers the timorous, encourages the despondent, and comforts the despairing.

The hopefulness and optimism of the physician do far more than cure feeble minds and faltering wills. They assist the cure of every disease he encounters. His very cock-sureness—to use a favorite expression of a well-known specialist, "I am not only sure, but I am cock-sure"—and especially his cheerfulness, hopefulness and optimism, produce a confidence and belief in his powers that cure quite as much as any means that he may use.

Alteratives for the mind are generally more important and efficacious than alteratives for the body.

Coleridge considered him the best physician who inspired most hope. The patient should receive the full benefit of hope. If he be a man cast in common mold as regards love of life and dread of death, expression must never be given to our fears in any form. The bare suggestion of death to such a man may turn the scale against recovery. Fear being recognized as a powerful cause of disease and a direct and great obstacle to recovery, a wise physician will exert himself to prevent or antidote its influence. To eradicate fear and stimulate hope is to avert disease, to shorten its duration, diminish its virulence and promote

recovery. There is a mental and moral sanitation ahead of us which is perhaps as valuable and desirable as all our quarantines, inventions, experimentations and all microscopic search for physical causes.

Three Vital Ideas

You should make a point of so disciplining and training yourself as to infuse at least three ideas into your patient's mind at every visit.

1. That the case has your whole and undivided attention.

2. That you thoroughly understand it; and

3. That you believe you can cure it, or at any rate, take a hopeful view of it.

You must remember that with each sufferer who may come before you there is an individual history, as interesting as, perhaps more so than, your own.

Let me caution you against the narrow jealousies, the envious moods and petty rivalries which not infrequently mar the practice of your exalted profession, and are a reproach to its heart and intelligence. They not only impair the physician's dignity and his usefulness to society, but, being readily perceived by an observant laity, prove detrimental to the general prestige of the medical fraternity. "There is glory enough for all," as Admiral Schley magnanimously signalled, and the encouragement and maintenance of a generous *esprit du corps* should be your constant price.

A yet more potent factor than professional rivalry in molding this personal zeal is the omnipresent craze for financial gain; a desire to get rich as speedily as possible regardless of methods.

In all ages men have loved wealth. A love of money for the accomplishment of honest purposes is perfectly legitimate, indeed commendable. Yet no careful observer, I think, can fail to perceive that within a few generations there has crept over the American people a strangely inordinate lust for lucre, an all-devouring passion for material prosperity, degrading in its motive and deplorable in its moral influence. The craze has unfortunately been

rendered the more acute because of the numerous brilliant examples of success in speculative and professional life, and the mysterious process by which comparatively impecunious individuals throughout the land suddenly acquire more than a competency.

Where the logic of these triumphs is not clear to the public mind there arises a natural distrust, together with an ill-defined and not overscrupulous tendency to emulate the achievement.

The possession of wealth cannot compare with having the mentality stirred by a passion for expansion, being dragged out of the narrow rut of ignorance to come into close communion with the great and the grand of all ages, being brought into contact with nature, feeling the divine touch of science, and forming intimate relations with the entire universe.

The men who enrich the world with real wealth are not, as a rule, those who have the most money.

Nothing is more pitiable than for a person to have more property than he has manhood.

What the World Needs

What the world wants is young men who will amass golden thoughts, golden wisdom, golden deeds, not mere golden dollars; young men who prefer to have thought-capital, character-capital rather than cash-capital.

Your chief motive for entering the medical profession should be for the love of the work, not for money alone.

The idea of working for the love of the thing was exemplified in John Hunter, the founder of the Royal College of Surgeons. He had not a large income and was compelled to work steadily at his practice.

When absorbed in his grand investigations and being interrupted by a patient he would testily exclaim: "There is that confounded guinea to be earned!"

He simply proved what many others have also done—that medicine is a grand profession, but a very poor trade.

Pecuniary success, in a comparative business sense, is certainly not one of the con-

spicuous rewards for the doctor. Success in life is to be regarded as a means, and not as an end; and that therefore there is such a thing possible as unsuccessful success—such a thing as gaining every end, while the whole life has been a failure.

Popularity is not the test of success. As Cowley says: "Every mountebank has more than the best doctor, and the hangman more than the lord chief justice of a city."

Success is the accomplishment of the laudable life—purpose of a man of natural or cultivated parts who has found an object in life worth living for and has worked honestly and perseveringly to attain it.

The man who does the very best he can under all circumstances, who makes the most of his ability and opportunities, who helps his fellow men whenever it is in his power to do so, who gives the best of himself to every occasion, who is loyal and true in his friendships, kindly, charitable and 'magnanimous toward all, is a successful man. The greatest thing a man can do is to make the most possible out of the stuff that has been given to him. Make every occasion a great occasion, for you cannot tell when Fate will take your measure for a higher place.

The world wants the very best thing. It wants your best. No man fails who does his best. You'll have money enough if you do that, but don't get it into your head that in order to be a very successful man you must be a very rich man.

Money and Real Success

There is really very little connection between the accumulation of money and real success.

And yet I have heard lecturers say that every poor boy could succeed, and citing as examples men who, twenty years ago perhaps, were working for from \$20 to \$50 a month on farms or in shops and who now are presidents of railroads, banks, coal-mines, steel trusts, etc., at from \$50,000 to \$1,000,000 a year, the young men going away believing that financial success is the only success in life. And they have some reason for believing this, for the standard by which

society now measures men is the purse; politics is becoming a high chess play, whose pawns are power and plunder; business is becoming but a gouge game wherein success hallows any means; our social favorites minister in the temple of Mammon; our god is the golden calf.

Cincinnatus no longer waits for the office to seek the man; he sells some watered stock and buys a political boom. The princes of old conquered the earth, but the modern plutocrats put a mortgage on it. Such is the modern standard of success—and it is all wrong. Money is not all of life.

"When a man pursues money only," said David Swing, "his features become narrowed; his eyes shrink and converge; his smile, when he has any, hardens; his language fails of poetry and ornament; his letters to a friend dwindle down to a telegraphic dispatch; he seems to have no time for anything, because his heart has only one thing for which it wishes time."

How different from Louis Agassiz, who, when asked why he did not acquire a handsome competency in view of his rare talents, replied, "Oh, I have not time to make money."

Contrast with this noble attitude the fawning flattery, the self-conceit and arrogance visible everywhere in ultrafashionable society.

Some Successes—and Some Failures

A simple farmer loving his work and contented in his home and doing the best he can for himself and others is as successful as the president of a coal-trust—and more so. Father Damien was the grandest success of the century; Alexander of Macedon the most miserable failure known to human history. Success? A Rockefeller must give up his gold at the grave, the sovereign surrenders his scepter.

Why should men strive for power that passes like the perfume of the dawn and leaves prince and pauper peers in death?

Why should man, made in the mortal image of immortal God, become the subservient slave of Greed and barter all of time for a handful of yellow dross to cast upon the threshold of eternity?

"Poor and content is rich, and rich enough. With a roof to shelter those his heart holds dear, and table furnished forth with frugal fare, with manhood's dauntless courage and woman's deathless love, the peasant in his lowly cot may be richer, far, than the prince in his imperial hall."

Success? I would rather be a farmer on forty acres of land than a miserly millionaire preying upon the misfortunes of his fellows. I would rather be a peddler of hot peanuts than a plotting politician who gives to bond-grabbers and boodlers privilege to despoil the pantries of the poor. I would rather watch the stars shining down through blue immensity and the cool mists creeping round the purple hills than purchase with ill-gotten gains all the tawdry treasures of Ophir and of Ind. I would rather be a doctor in a lumber camp on \$500 a year, and see the love-light blaze in truthful eyes and watch my children grow in grace and the truth of God, and minister patiently and cheerfully to the sick and suffering in the community like Dr. MacClure in the Bonnie Briar Bush than to build of widows' sighs and orphans' tears a flimsy bubble of fame to be blown adown the narrow beach of time into Eternity's shoreless sea.

What we need to teach our boys is to aspire to be men, not plutocrats; to do whatever their hands find to do, and to do it honestly and well.

Help to Improve the Condition of Society

As a member of a noble profession, you should add your haven toward improving the conditions of society. I assert that what the community today most lacks is the individual instance of virtue, so that all the world may say with Shakespeare, "This was man"—a noble, virile type, the living exemplar of that high conscience, that stainless sense of honor and incorruptible love of truth which alone proclaim the Creator's image. Where in the range of the educated professions, in politics, in art, in science, in literature or in the worlds of trade and the artisan shall we find our Sidney, or Bayard?

No one could wield a stronger influence in the community than the doctor, if he

would but exercise it, and it is our duty to stand for personal and public honor and honesty and for the enforcement of law and good government.

We need more men of backbone in this country and fewer whiffing, greedy, politicians and grafting millionaires. Descartes has said: "If it be possible to perfect the human race it is in medicine that we must seek the means."

It's up to you! It is the duty of the medical profession also to disseminate knowledge among the laity regarding social and sexual hygiene, and the prevention of disease.

It is time to do away with prudery and false modesty, in the interest of public health and better morals.

As physicians, members of a noble profession, you should emerge from the seclusion of the study and remember that you are not to be relegated to the eighth estate to which the grewsome undertaker and parish sexton are consigned, but should stand as a living power in the community, pulsating with its emotions, bound to it by indissoluble ties of sympathetic interest, and, through force of character, supplying the deficiencies of others.

State Board Examinations

Hints to Those who Must Pass Them

By R. G. SCHROTH, M. D., Chicago, Illinois

EDITORIAL NOTE.—There is probably no man in the country who has had so much experience in preparing physicians to pass medical examinations as Dr. Schroth. And his students pass! The secret of his success is the carefulness with which they are trained to systematize their knowledge, to "put two and two together." In this article the doctor takes us behind the screen and shows us how he trains men to study.

YOU will find this article worth reading and considering. File this journal away cautiously in a convenient place, so that you may frequently refer to it, or else give it to some other worthy individual.

If through these few lines you can obtain the great secret, How to Prepare Yourself for a State-Board Examination, you will not only pass the examination, but you will have acquired a complete equipment for your life's journey in the medical profession. There is no examination which requires more forethought, reflection, learning and mind capacity, than does the state medical examination, for it requires positiveness, sincerity and enthusiasm, not only with oneself, but also with the surrounding conditions.

Lay a Firm Foundation for Your Studies

You should remember that you have chosen the medical profession as your life's

work, of your own free will and accord, after due consideration and without misinformation, and you must know that the profits derived therefrom are gauged according to the faithful fulfilment of the obligation you took to yourself when you first said, "I am going to study medicine." And therefore you should consider the fact that there is only one person in this world that could be a drawback to your success in completing your course by preparing yourself for a board examination, and that person is yourself; also, that there is only one person for whom there is no help in self-preparatory work, and that person is the one who will not help himself.

You can, by your will and the power incorporated within yourself, bring art out of the realms of supposed medical mysteries, and obtain the best for yourself, without experiment, in a short time, if you will have a watchful eye, listening ears, a thinking mind and a positive will. You must try

to solve the disheartening blunders and overcome the disastrous guesswork and wasted opportunities of the past.

You must awaken the spirit within yourself, and reach out quickly with both hands and mind for everything good that leads to your success, otherwise you are not worthy the honorable title of a physician. Do not try to get a "passing-mark" of only 75; try for a hundred. Be positive and sure within yourself that you can accomplish all things and can do what others can not do. Do not try to be ultrascientific; your system should be to *think*, to *know*, to *do* and to *accomplish* all things by the five physical senses in a practical and simple way.

Action—Not Weak Wishing

Decision—then activity. This must necessarily follow. It is not enough to "wish." Wishing never accomplished anything. You must say, "I will." What you will to do, you can do; and what is worth doing is worth beginning—*now—today*. Indecision and hesitancy, when reason tells you to act, are fatal. It is not time to wonder whether you can do it. "*Do the thing and you shall have the power.*" This is the law. It is folly to wait for better conditions. The thing to do is to prepare yourself now. Preparation always preceded positiveness; and positiveness precedes promotion; and promotion precedes success every time. Prepare yourself, and when the opportunity comes you will be ready.

Advancement is for you, but you must make an effort to meet your opportunity at least half way.

It has been ascertained that the most successful method of learning is something after the following way: Make every day a new day. When you go to bed, and also when you get up in the morning and your mind is clear and in a receptive state, ask yourself, as if in prayer: "What can I remember of yesterday's work? What have I accomplished? How much am I going to accomplish today?"

When you wish to study, arrange to do so fifteen minutes before each meal, before going to bed, when getting up, and a half

hour or an hour each morning, afternoon and evening, as though you were administering medicine to a patient. Do this conscientiously and systematically, and let no person or no thing break into these solemn silent moments. This is the way to study without becoming tired. If you can increase the time without becoming tired, do so.

From the very beginning of your new quiz work endeavor to master and make your own medical terms and phraseology, like all other influential professional men; in short, live in the atmosphere of a physician. Classify and simplify your own knowledge, study one subject at a time, carefully, regularly and systematically.

How to Study to Best Advantage

First read the questions on one subject through, as you would an English classic. Then go over it again, making a critical study of the questions; close your eyes and think, and have the pictures of the question photographed upon your mind. Now begin all over, dissect each question, and mark and emphasize such questions as may impress you as being important. Then go over the entire list and answer to yourself the questions you think you can answer without looking at the printed answer. Now turn back to the guide questions, and compare your answer with the ones in the book, to see whether or not you have selected the vital parts of your answer; if not, repeat again, closing your eyes. If possible, do this in a quiet room, so as to shut off all outside influences; think over the work, and see if the same answer will not apply to other questions or groups of questions. Do not try to learn by heart groups of useless words.

The questions you study should be used only as a guide. Read the question, then try to formulate your own answer before you read the answer. Criticise yourself severely for not knowing. Make up your mind to remember what you fell down on and how you reprimanded yourself. Recall the time, the location where and how you sat, whether or not you were feeling well that

day. This will aid you in strengthening your mind, and later on all things will come more easily, for you are learning how to concentrate your mind. Study with a pencil in your hand, picture, dictionary and paper before you; better still, call on your faculty of imagination, and draw a picture in your own mind, and then explain your mental picture.

If you find your mind is not clear on the subject, go over it again and again. This may seem tedious, but remember you are "monarch of all you survey" and your rights none can dispute, and that no one can make you master of your memory and will except yourself.

If your mind begins to feel tired, as sometimes will happen, treat it as you would your wife, your mother, or child—take a vacation or change subjects, or let your mind have rest and recreation, for when mentally tired, you can accomplish nothing. How long should you rest? That depends upon the amount of depression, and the best guide is, until you feel like working again, even though it be an hour or two. Forgetting things which you previously knew is no crime, it happens to everyone. You should remember that we only learn by persistent reflection, comparison, association, and forethought.

How Memorizing Is Simplified

Many questions take the same answer, or at least have a varied degree of similarity, and therefore a distinct connection of thought can be made between them, or they may be figured out.

Follow me for a moment:

1. What muscles are attached to the posterior part of the inferior surface of the tuberosity of the ischium? Biceps, semimembranosus, semitendinosus.

2. What muscles flex the leg and draw the thigh back in running? Biceps, semimembranosus, semitendinosus.

3. What muscles form the posterior region of the thigh? Biceps, semimembranosus, semitendinosus.

4. What muscles form the hamstring? Biceps, semimembranosus, semitendinosus.

5. What muscles form the external hamstring? Biceps.

6. What muscles form the internal hamstring? Semimembranosus, semitendinosus. Some authors include sartorius and gracilis.

7. What muscles are supplied by the great sciatic nerve? Biceps, semimembranosus, semitendinosus, and a branch to adductor magnus.

From the above you will observe that beside the individual questions you have the action, nerve supply and origin of the biceps, semimembranosus and semitendinosus. All that is necessary is the insertion to get the complete description. Of course it will then be easy to get the rest of the technic.

8. Describe the biceps.

The biceps arises from the posterior part of the inferior surface of the tuberosity of the ischium, and by its short head from the linea aspera of the femur just below its middle, inserted into the head of the fibula externally: action. Flex the leg on the thigh and draw the thigh back in running. Nerve: great sciatic.

9. Describe the semitendinosus.

It arises from the posterior part of the inferior surface of the tuberosity of the ischium, with the biceps inserted into the upper fourth of the internal surface of the tibia. Action and nerve: same as for biceps.

10. Describe the semimembranosus.

It arises from the posterior part of the inferior surface of the tuberosity of the ischium, inserted into a transverse groove on the posterior surface of the internal tuberosity of the tibia. Action and nerve: same as for biceps.

After you have mastered this much of the work, looked at the picture in the book and have it photographed upon the mind, then you can read from the textbook and get the minor details, if you want them.

Simple Method for Learning Skeletal Articulations

Here is another simple method of learning articulations.

Name and give the articulations of the bones of the face:

Face—14 Bones

2 Lacrimal, 2 malar, 2 nasal, 2 superior maxillary, 2 palatal, 1 vomer, 2 inferior turbinated, 1 inferior maxillary.

<i>Sup. Max.</i>			<i>Palatal</i>		
L	Lacrimal	I	V	Vomer	I
M	Malar	I	O	Opp. palatal	I
N	Nasal	I	I	Inf. turb.	I
O	Opp. sup. max.	I	S	Sphenoid	I
P	Palatal	I	E	Ethmoid	I
F	Frontal	I	S	Sup. max.	I
I	Inf. turb.	I			—
V	Vomer	I			6
E	Ethmoid	I			

9

<i>Lacrimal</i>			<i>Vomer</i>		
F	Frontal	I	P	Palatal	2
I	Inf. turb.	I	E	Ethmoid	I
E	Ethmoid	I	S	Sup. max.	2
S	Sup. max.	I	S	Sphenoid	I
		4			6

4

<i>Malar</i>			<i>Inf. Turb.</i>		
S	Sphenoid	I	S	Sup. max.	I
O	Sup. max.	I	P	Palatal	I
F	Frontal	I	E	Ethmoid	I
T	Temporal	I	L	Lacrimal	I
		4			4

4

<i>Nasal</i>			<i>Inf. Max</i>	
F	Frontal	I	Temporals	2
O	Opp. nasal	I		
E	Ethmoid	I		
S	Sup. max.	I		
		—		
		4		

4

You can do the same with the arteries and of course so with every branch of medicine and surgery. For example:

What are the branches of the thoracic aorta?

P.	Please	P.	Pericardiac
B.	Bring	B.	Bronchial
O.	Out	O.	Oesophageal
M.	My	M.	Mediastinal Post
I.	Instruments	I.	Intercoastal Post

You note the first letter in each word corresponds to the first letter in the name of the branch. These illustrations are given only for the purpose of showing how you can learn them by heart. After you have them learned, then it is easy enough for you to take a book or look at a cadaver, and figure them out, and remember them forever. Many have seen these points illustrated on the skeleton and cadaver, but cannot remember them in rotation.

You see, in the foregoing illustrations you take twenty of the most common questions, asked by various state boards. You have simplified, systematized and concentrated them, and you master them—they are yours forever. Your money and your power, and today even your honor, can be taken from you, or your character can be misrepresented by some low-lived creature, but no one can take your knowledge.

In Regard to Books

Use a book that will present everything in proper and natural form; one that may be easily understood; a book that gives new thought and ability; one that expresses original ideas, not one that will refer to textbooks or quote authors, where all may read for themselves, and understand each differently. Book knowledge is good and necessary, but facts which can be figured out and explained with original thought without the books are better, for they enable the physician to stand on solid ground at all times. When studying from a book, scratch out all useless comment, argument, unimportant history or dates, so that you will never commit the sin of wasting time by going over that work again; also mark the work you know with a pencil, so that you will put in all your time on work you are not sure of.

After You Have Your License

After you have passed the state examination, remember the fact that the world makes way for the physician who possesses the knowledge, has the experience, exercises his power, and uses his ability.

In every city, town or village, when a perplexing question arises, the physician who is called for is the one who is up-to-date, and the one whom the public generally recognize and make the authority. It may be worth thousands of dollars for you to be the physician who has these qualifications and be able to converse fluently on all subjects and explain perplexing questions to the patient, or in court, as well as in medical meetings.

Many physicians are criticised for their lack of applicability in explaining conditions, not for their lack of phraseology, but because

of the use of too many beautiful phrases, clauses and superlatives, and the lack of ability to lay the subject under discussion before the public as well as in the profession, in a simple and concise manner, so that, regardless of education, all facts are realized and retained.

For Your Future Welfare and Personal Protection

I would advise you to take an insurance policy to protect yourself against mal-practice suits, for each state creates its own laws and gives the health of the community to the medical profession. In compensation of which each state requires what? A certain degree of care, skill and diligence of each member of the profession. For this reason each state requires what? That every physician must be of legal age; he must possess a diploma of a recognized college; he must be of good moral character; he must pass a state examination, receive a license, and have it registered in the county where he locates. (State board question.) What requirements are necessary for a physician in order to practise in this state? Answered above.

After you have all this, then you are dealing with the public. By having a policy of this kind, you may save yourself time, money, and humiliation from blackmailers. By having a policy of this kind, and possessing the knowledge, watching yourself and the mistakes of others, you can stop the smooth oily tongues of so-called friends, and bring it within your own power, and provide for yourself, without cost, the means of making such vigorous attacks or defense against such persons, which may not only enable you to vindicate yourself in your own case but contribute to prevent others from bringing like results. And in order to do this, you must be able to answer any question in due form, authoritatively, positively and correctly, without hesitation—misinformation or hearsay for these statements are dangerous.

In Regard to State Board Courses

No doubt it would be highly advantageous and of inestimable value for you, in con-

nection with a self-review course, to take some special stereopticon or reflectoscopic work under an experienced instructor. Not a professor or lecturer, but a teacher and quizmaster.

If you intend to take a state-board preparatory course, investigate for yourself which is the best for you. Take one not best advertised, or one of reputation, but the one that delivers the goods; the one that teaches according to your fancy; the one that gives the greatest amount of work in the shortest space of time; a course that stands for the latest, the broadest, and the best system of teaching. Do not waste time with a course that is conducted on the university plan, which makes the student dig it out of the text-books for himself, for it is too long-winded and contains too many beautiful words, which obscures the sense of the subject rather than bringing out the absolute facts.

I sincerely hope that the reader of this article will never be so low or unethical or degrade himself to such an extent as to cause a breach in our most-honorable profession by denouncing another member of our profession because he feels himself superior to others in any way, or because he is jealous of the success and advancement of another.

Do not be the man or never assist the man who stands on top and tries to make others believe that he is "The Great I Am," or the one who holds his position because someone has put him there, or because he has used such diabolic political influence to apparently rule, or puts himself on a pedestal for a superior people to worship him as a false god. Be honorable, jovial and a good friend, and a good fellow among your brother physicians.

In closing, I will say that if all I have accomplished by this article is to have only caused you to think, I shall feel that I have done my part toward making you successful, at least to a small extent; and I sincerely hope that whenever others come to you under similar conditions you will do as much for them, provided they are worthy of it.

Openings for Young Physicians in the Army

The Advantages of Army Service and How to Get Into It

By J. R. HARRIS, M. D., Fort George Wright, Washington
Captain, Medical Corps, United States Army.

TO the recent graduate any salaried position seems small. He is confronted by the apparent prosperity of his teachers and feels certain that he will do as well. But will he?

Compensation and Expenses of Army Officers

Service in the army offers, from a financial view-point, a good living from the start; with no initial expense for instruments, books or rent. The salary of two thousand dollars, the pay of a first lieutenant, is increased in three years, with advance to the grade of captain, to two thousand four hundred, and a corresponding increase with each subsequent advance in rank. The three years as a lieutenant are, in a way, a probationary period, and advance from the grade of captain will of course be some years later. Every five years there is an increase of ten percent in the pay for continued length of service. For service outside the limits of the United States there is a further increase of ten percent.

In addition there are free living quarters, with a liberal allowance of light and heat, the privilege of having two horses fed and stabled by the Government, besides an annual payment of one hundred and fifty dollars for one horse, or two hundred for two, made to reimburse the mounted officer for the expenses of care and grooming them and the increased destruction of clothing due to riding—and the allowance seems liberal. Contrary to the usual belief, the officers are not furnished food or clothing, but they may purchase, at wholesale rates, many articles of food and equipment from the supply departments.

During the first year considerable expense ensues from the purchase of uniforms, and so forth, but need not exceed three

hundred dollars. Many of the articles of equipment may, in most cases, be left till later, especially as the usual first station of the new officer is in the Philippine Islands; however, with care, the rest of the necessary outfit could be bought for one hundred and fifty more, and most of the things will last for years.

Professional Opportunities

As a rule, in times of peace, the number of sick a medical officer is called upon to treat is never so great that he cannot give each case full and scientific study, and, as there is no question of limiting his visits for financial reasons, he may see the outcome and watch the case as long as there is any interest in it. In most of his cases, treated, as they are, in the hospital, he may enforce the diet, treatment, etc., and know exactly what the patient is doing, the same as in civil hospitals. The post hospitals usually are well equipped, and the library of standard works is kept up to date by the frequent addition of new books, either upon request or by direction of the Surgeon General. Six or eight medical journals are on file, besides a circulating library of medical and scientific periodicals.

The laboratory is equipped for ordinary study, but it is not difficult to obtain any equipment necessary for research work, provided the worker can show his ability.

Practice is limited, mostly, to acute diseases, as the chronic cases are usually discharged or sent to the general hospitals.

There is just enough in the way of obstetrics, gynecology and pediatrics to keep one familiar with the books and to study on the subjects.

The military work consists of sanitary work and instruction in the posts and camps, and drill and instruction of the hospital

corps, consisting of the nurses and attendants. (There are no female nurses except at the larger general hospitals, as at Washington or San Francisco.) Also one is required to keep himself in good physical condition, and in practice in horsemanship.

The writer has been told that he was no more than a slave in the military service, and this may be so, but certainly he is not such as the very men who made the assertion. The army surgeon, of course, must obey his superiors in their lawful commands.

The medical officer goes to the station to which he is assigned. He is confined to his post for a certain part of the day, and if the only doctor in the garrison, he must so arrange that he may be found readily at any time, or if away from the post, that his sergeant may be available for emergencies—and most of the sergeants are capable of attending emergencies, such as ordinary accidents, colics, and other acute conditions. He has only one month's leave (vacation) a year on full pay. However, when sick and granted a sick-leave, that does not apply on his regular leave.

When he reaches the age of sixty-four, he is sent to his home, retired, on pay equivalent to three-fourths of what he last drew in active service; or he may retire voluntarily after thirty or more years of service. The retired-pay may range from two hundred fifty to three hundred twelve dollars a month, according to the grade held upon retiring.

Compare that with the life of a practitioner in civil life, and it will be seen that in general the advantages are with the military man. More satisfactory conditions of treatment of cases, more leisure, better prospects for old age, being distinct advantages. Moreover, at many stations the doctor, if he so desires, may engage in such civil practice as will not interfere with his military work; and there are stations where the surgeon can earn fully as much additional as his regular pay.

Special Advantages Enjoyed

One gets opportunity to see the world at large besides the whole of our own country. In addition to crossing the continent twice,

the writer, during three years of "foreign" service, two times made a tour around the world; that is from New York to Manila, by way of the Suez Canal, and back by the same route, and from Manila to San Francisco, and return. All these voyages were made on board an army transport, and included stays of an average of two and a half days each at Nagasaki, Guam, Honolulu, Singapore, Colombo, Aden, Port Said, Cairo, Malta and Gibraltar, most of the last series being visited twice. The P. & O. steamers making the tourist trips to these ports lay to only about half a day. The cost of this experience, exclusive of purchases of curios and incidentals, was not over two hundred dollars. Now the writer has been ordered to Alaska, where no doubt he will have a very interesting experience. The foreign service referred to, needless to say, was that in the Philippine Islands.

Socially one meets and is associated with a very fine class of people in the officers of the army and their families, as well as the society of the communities near which one may be stationed. No doubt the fact that one is an army officer establishes his position as a gentleman and opens to him, and his, the best society of any community.

In scientific attainment the medical department of the army stands high. A direct offshoot of the work of medical officers of the early days is the weather bureau, the work of which later (as remembered by many now in the army) was transferred to the Department of Agriculture. The signal corps of the army is the outcome of the efforts of a member of the medical corps to perfect means of finding and succoring the wounded on the battle-field. So also is it needless to remind the reader of the great work of the immortal Reed and his associates; or of Gorgas. Surely, as long as our civilization lasts, the sanitary triumphs of these men will redound to the glory of the medical corps of the army of our country.

The admission to the medical corps is, first, by examination and admission to the medical reserve corps, a branch of the corps, the great object of which is to provide

a reserve of trained men for war service, but many of whose members are, in the present shortage of men, called upon for active service in times of peace. The examinations for the reserve corps commission are given at some post near the residence of the applicant. If accepted, he is ordered to the next session of the army medical school and given a course of instruction in army specialties.

Those who pass the examinations and are graduated from this school are given commissions as medical officers of the army proper. Such as receive this commission are required to promise to stay in the service for five years, unless sooner discharged. However, there is opportunity at the end

of three years to leave the service; indeed, if a man's record, during the three years of probation in the grade of first lieutenant, shows that he is not adapted to the conditions of the service, it is probable that the Government will discharge him at that time with a year's extra pay.

On the whole, the position of medical officer in the army seems to be quite desirable and generally satisfactory. The freedom from monetary cares, in the shape of worry over lack of practice and poor collections, is an offset to any of its disadvantages. Of course it has disadvantages, as there are in any other condition of life, but, as shown above, these are outweighed by corresponding advantages.

The Medical Corps of the United States Navy

The Opportunities it Presents for a Career

EDITORIAL NOTE—The article which follows we owe to the courtesy of Surgeon-General C. F. Stokes, of the United States Navy, by whom it is submitted, in behalf of the Bureau of Medicine and Surgery of the Navy Department, with the hope that it will give data of interest and value to young physicians who are contemplating a career in one of the military arms of our Government Service.

THERE has never been a time since ships were used for fighting purposes that there has not been some provision for the care of the sick and wounded on board them. But the history and development of this medical corps, though of great moment and interest, must be laid to one side, for the young man graduating from a medical school is looking for facts bearing on the immediate present and future, not on the past. These may be presented under the following headings:

1. Method of entrance into the Medical Corps of the Navy.
2. Pecuniary returns from such service and opportunities for advancement.
3. Extent and opportunities for professional work.

1. Method of Entrance Into the Medical Corps and Navy

A candidate, to enter the corps, is required to file a request with the Secretary

of the Navy stating his age, citizenship and residence, which is to be accompanied by two certificates as to his moral character, habits and citizenship. When the permit is granted, he communicates with the president of the examining board, who fixes a date for his appearance. In order to be prepared for this examination the candidate for acting assistant surgeon must be between the ages of 21 and 28, or of such age as will permit of his graduation from the Naval Medical School before he reaches his thirtieth birthday. He must also be physically sound and well prepared professionally, as the test is a broad one, coming under three heads: (1) physical; (2) professional; (3) collateral.

The *physical* is far more thorough than an examination for life insurance, for the defects that are looked for are not only those that may endanger the life of the individual but cover, also, those which may in any way incapacitate him for the per-

formance of his duties, i. e., vision, color-perception, weight and height, deformities, and so on.

If disqualified physically, the examination is concluded at once, but if the young physician is found to be sound, his *professional* examination begins. This covers every subject that is taught in the recognized medical schools of the world and is a thorough oral, written and practical test, with the sole aim of finding out minutely the extent of the candidate's knowledge.

The *collateral* examination has been going on during the professional examination, for this embraces spelling, writing, grammar and knowledge of the English language. The special collateral subjects such as history, geology, botany, zoology, languages, etc., may be omitted provided an applicant has graduated from a reputable literary or scientific college, normal or high school, or from a medical school requiring entrance examinations satisfactory to the Naval Medical Examining Board.

Having been successful in the examination, the candidate is appointed to the Medical Corps, by the Secretary of the Navy, as an Acting Assistant Surgeon and assigned usually to a naval hospital for duty. The October following his appointment he is ordered to the Naval Medical School where, for six months, he has a thorough training in his duties as a Medical Officer in the Navy and in professional subjects as developed by the special requirements of a military service. At present he receives, during the period of his appointment as Acting Assistant Surgeon, a yearly pay of \$1400 while on shore, and \$1700 if sent to sea.

There is now before Congress a bill to establish a Naval Medical Reserve Corps which will take the place of the acting assistant surgeon's grade and men entering it will be on the same footing, regarding pay and allowances, as assistant surgeons of the regular corps. If this legislation fails to pass, it is considered possible that the grade of acting assistant will be dropped and appointments made directly into the regular Corps, under which circumstance

appointees will receive the pay and allowances, as shown in the accompanying table, for assistant surgeons.

Upon the completion of the course the student officers are again examined, failure meaning a revocation of appointment, success, meaning an appointment as an assistant surgeon in the regular Medical Corps of the Navy (a commissioned officer with the rank of lieutenant, junior grade). From now on there is steady promotion, depending upon examination and seniority, as the tenure of office is for life unless sooner terminated by removal, resignation, disability or casualty.

2. Pecuniary Returns from Such Service and Opportunities for Advancement

Upon entering the regular Naval Service, medical officers are credited with five years' service in recognition of the fact that they have been at their own expense in preparing themselves for the Government Service. For each succeeding period of five years the officer receives 10 percent increase upon the pay of the grade he occupies. The accompanying table shows the promotion and pay in the various grades:

There are also certain allowances and emoluments not covered by this table:

1. Liberal allowances for fuel and coal when serving on shore.

2. Eight cents a mile when traveling under orders within the limits of the United States.

3. Actual expenses when traveling outside the limits of the United States, under orders.

4. Retirement on three-fourths' pay (any time during career) on account of disease or injury resulting from causes incident to the service.

5. Retirement (upon application) on three-fourths' pay after thirty years' service.

6. Retirement on three-fourths' pay at the age of sixty-two.

7. In case of death from causes incident to the service, payment of a sum equivalent to six months' pay at the rate received at the time of death, to beneficiary.

Title	Corresponding rank in Navy and Army		Estimated years in each grade	Pay per Annum		Allow- ance for quarters per Year
				On Shore	At Sea	
Assistant Surgeon ..	Lieutenant (junior grade)	1st. Lieut.	3 (fixed by law)	\$2200.00	\$2420.00	\$ 432.00
Passed Asst. Surg. .	Lieutenant.....	Captain	8.....	2640.00	2904.00	576.00
(After five years in service).....				2880.00	3168.00	576.00
(After ten years in service)				3120.00	3432.00	576.00
Surgeon.....	Lieut. Com.	Major	8.....	3600.00	3960.00	720.00
(After ten years in service)				3900.00	4290.00	720.00
(After 15 years in service)				4000.00	4400.00	720.00
Med. Inspectors ..	Commander	Lieut. Col.	8.....	4500.00	4950.00	864.00
(After 15 years in service)				5000.00	5500.00	1008.00
Med. Directors ..	Captain	Colonel	Until age of 62 .. is reached	5000.00	5500.00	1008.00
(After 15 years in service) ..						
Surgeon General ..	Rear Admiral....	Brigadier Gen- eral	By Presidential appointment for term of four years	6000.00	6600.00	1152.00

3. Opportunities for Professional Work

This offers a very wide field, both for general practice and for specializing. Besides the fifty or sixty thousand officers and men of the Navy and Marine Corps, the Medical Corps cares for the officers' families, retired officers and their families, and the civilian employees at the big navy yards and stations, not to mention the thousands of natives in our possessions. This work is carried on in field hospitals, dispensaries, sick-bays of ships, hospital ships and hospitals, not only in our own country and possessions but in foreign countries all over the world.

Aside from purely medical and surgical work there are the multitudinous duties resulting from association with a large body of men in a military service. One of the most important of these duties is the safe-

guarding of the high physical standard set for all individuals entering the navy, both officers and men. When it is realized that every one of them is stripped, weighed and measured, examined physically in the most minute detail, land record of all marks and scars taken, to say nothing of the record of finger-prints kept in the case of enlisted men, the immense amount of work involved in this one department will be seen. Add to this duties as sanitary and quarantine officers, instructors of entering medical officers, of hospital corps and enlisted men; also special duties on boards, at national or international congresses and medical societies, and with foreign countries in time of war, famine or devastation, and some small idea of the extent of the ground covered may be obtained.



The Physician's Work in the Indian Service

A Field for the Young Doctor

By FRANK D. PATTERSON, M. D., Schurz, Nevada

HAVING been requested to write an article for the benefit of the recent medical graduates concerning the various phases of medical practice among the Indians, I will in brief give a synopsis concerning this work in the United States Indian Service.

To begin with, the minute details as to how to obtain such a position are given in full in the "Manual of Examinations" issued by the Civil Service Commission. However, a physician capable of passing the average state-board examination will have no difficulty in passing Uncle Sam's quiz, only he will not receive quite so high a mark as he would on a state-board examination, the system of marking Government examination papers being very close.

The professional work varies on different reservations according to the state of civilization of the different tribes. As I have not been in the service quite a year, and that only in a little reservation in western Nevada, where the copper-hued natives are not very much past the scalping period, I shall speak only of what traits of Indian character I have become familiar with in my short experience among the Pah Utes of the Walker River reservation.

The Medicine-Man

These Indians, during the short time in which I have been among them, have to a great extent abandoned their native medicine-men. In some of the older reservations it has been the policy to arrest these pseudo practitioners, but on this reservation moral suasion has been resorted to rather than force. The more intelligent of the Indians, especially those who have been away to a school in which are taught the grades higher than those taught here, have, through education, lost faith in the medicine-men. It may be said here that mental suggestion is the basis of the treatment

resorted to by these native practitioners. The first thing he does is to throw the patient into a hypnotic trance, assuring the friends that he alone can remove the spell, at the same time requiring the payment of a large sum of money before going any further with his treatment. These cunning fellows do not do any credit business and will even extort a poor Indian's last cow.

All-Pervading Prevalence of Tuberculosis

On the Walker River reservation, effective sanitation is much needed. An alarming proportion of these Pah Utes have tuberculosis in some form or other, mostly of the pulmonary type; some have tubercular joints; and there are skin diseases galore, many of which are tubercular. They live in air-tight, overheated dwellings, or in wigwams or in tents. Naturally they are decidedly subject to lung troubles of some kind. Going directly from the hot stove out into the open during the winter, and being but thinly clad, as most of these Indians are, is it any wonder, then, that the tubercle bacillus raises havoc with them? Added to this is the fact that all the sputum as well as the evacuations from the bowels are left on the ground to dry. Naturally, the dust arising from the neighborhood of the Indian camping grounds and floating around promiscuously is a serious menace, not only to the Indians but to the white people as well. I have repeatedly, but in vain, appealed to the superintendent for a hospital for the segregation of the tuberculous, and so did my predecessor, but as this would require government funds, no such hospital has as yet been erected here, although some other reservations are thus provided for.

Recently I saw an old squaw whom I knew to be in an advanced state of consumption making baskets for the market. The material was willow twigs which she passed through her mouth and shaped with her

teeth. Such work ought not to be placed on the market without first being thoroughly disinfected. I called the superintendent's attention to this fact, but as that worthy did not fully appreciate the danger of the spread of disease by means of pathogenic organisms that suggestion simply went in at one ear and out at the other.

Aside from tuberculosis, gonorrhea is frightfully prevalent. As Indians can not be made to appreciate the latent tendency of the gonococcus, they cannot be induced to continue treatment for this disease after the urethral discharge ceases. Many, if not most of the so-called cases of rheumatism are directly traceable to this disease.

Difficulties of Obstetric Work

For obstetric work among the Pah Utes a doctor is rarely called. The nearest to that kind of work that I have had was a case of retention of membranes and placental debris, and it was not until after considerable urging that I was permitted to use my douche-curet and uterine auger, as Indians naturally shrink from anything flavoring of surgery. Although the woman had a frame hut, she preferred to repair to her wigwam when the labor-pains came on. Of course she was prevailed upon to go to the crude dwelling for this cleaning-out process, even though the aseptic conditions there were far from satisfactory. When in the wigwam, one has to be very careful not to let his clothes ignite from the open fire in the middle of the enclosed space; in fact, not long before a hole had been burned in one of the quilts belonging to the occupants.

With such a constant smoke in their crude dwellings, is it any wonder that there are so many sore-eyed Indians? A case of simple catarrhal conjunctivitis, if neglected, runs into a keratitis, and soon the cornea becomes opaque. Thus, by degrees, many of the Indians become blind even when their affliction cannot be directly traceable to the gonococcus.

Stocking Up With Alkaloidal Granules

I have had a serious difficulty to contend with in not having the modern up-to-date

remedies at my disposal. However, that difficulty will soon be obviated when the drugs which I ordered last fall come in, as among them is a goodly supply of the alkaloidal granules, plenty of adrenalin solution, and enough of glycerin. The physician previously here evidently did not appreciate the value of glycerin as a reliever of all kinds of congestion, or he would not have expected that only four pounds of that valuable remedy would do this reservation a whole year. Instead of antiphlogistine, I have, in cases of pneumonia, repeatedly used glycerin and flour, to the thickness of a paste, as a poultice. Jalap, antipyrin, acetanilid compound, and croton oil could very comfortably have been omitted from the list that had been previously ordered without being missed by a progressive physician. In some cases, where it was a certain thing that the directions would be faithfully followed, and where it was necessary to secure results, I have repeatedly used my own drugs, but it goes without saying that on a small salary one can not to any great extent buy medicine for the Indians.

Every October the agency doctor has to make out an order for medicines, instruments and surgical dressings. In certain cases drugs can be ordered in the open market, but to obtain that authority one must apply to the superintendent, and if this official cannot appreciate the suggestion, nothing can be done, as no other employe on the agency is permitted to correspond directly with the Department of the Interior at Washington.

The Indians Are Stubborn

One serious difficulty in treating them is the fact that so few Indians can tell the time of day, and few indeed there are who have in their possession a watch or a clock. That makes it extremely difficult to treat a serious case where medicine has to be given at frequent intervals.

It will not do to try to force Indians to take any kind of treatment, and at one time I came close to being shot for swabbing out a baby's throat against the will of both the child and the father. An Indian, though

in judgment only an overgrown child, has all the dignity of an individual, and he resents very keenly any interference with his personal liberty. Where moral suasion does not prevail, there is no other thing to be done but to let the Indian patient take the consequences of his neglect of treatment. Thus one sometimes has to see curable patients die. In fact, if there were not a few white people on this reservation on whom satisfactory results of treatment can be made manifest, there would be no inducement for any progressive physician to remain in the Indian service. If a physician is very fond of society, the Indian service is no place for him. Indeed very few do remain in the service more than three or four years, and probably on that account.

The Agency Not Conducive to Self-Advancement

The agency doctor is not, ordinarily, supposed to attend to outside practice, but where he is the only physician in a large territory, he is permitted to attend to such emergencies as arise. If he is inclined to be negligent in keeping up with the times in his profession, no examination, whether state-board or civil-service, will prevent him from becoming a back number; and that tendency to retrograde is greatly augmented when dealing with these crude specimens of humanity who are no intelligent critics of his ability in the Esculapian art. Out in private practice, where there is more intelligent criticism, is also greater incentive to keep up with the times.

It is quite customary for physicians to remain in the Indian service long enough to get a little ahead and go into private practice afterward, as the isolation of an Indian reservation does not have great charms for those more socially inclined. The usual salary paid is seventy-five dollars a month,

besides a few perquisites such as rent, fuel and light, and stationery. The physician may have his Sundays to himself if there is no urgent case on hand. He can also have a month off every year, with pay, if during that time he provides a substitute.

Summary

To sum up the situation as to the relative advantages of a physician's work in the Indian service as compared with that in private practice, the following facts must be taken into consideration:

1. In the Indian service one has an income from the start, while in private practice, especially in a city, it takes time to build up a practice. Many in private practice receive better incomes than in the Indian service, but to start in a city requires more capital than it does in a salaried position.

2. If a physician wants to be in society, the Indian service is no place for the gratification of his social instincts.

3. A physician in the Indian service must be extra well on his guard not to become a back number.

4. Unless the superintendent is a man abreast of the times, a physician's efforts to promote efficient sanitation are of no avail.

5. Last, but not least, is the difficulty in having Indians follow the doctor's directions, and sometimes having to see curable patients die for want of following directions. With the proper drugs on hand and the directions carefully followed as good results can be had in the treatment of Indians as in the treatment of white people, allowance being made for various physical defects. It is only a matter of time, however, when education and sanitation among Indians will be universal.



The Equipment of the Young Doctor's Office

By GEORGE H. CANDLER, M. D., Chicago, Illinois

EDITORIAL NOTE.—If the young doctor is determined to make a success in his profession, from the beginning, he should lay his plans to start right, and ponder long over the little things which mean so much. In Dr. Candler's paper he will find a big "bunch" of helpful and practical suggestions, which cannot fail to be of great service to him.

GIVEN the necessary mental equipment—as evidenced by the as yet uncreased "sheepskin" and bran-new state license—a seemingly favorable location and nicely situated office, it yet remains to furnish the latter in a way which will prove satisfactory both to the doctor and his clientele. Even as man is "judged by his apparel," so, to a very great extent, the "new doctor's" ability to do things is sized up by his equipment. The days when a man could start practice with a half dozen well-worn volumes, a surgical case, a pair of obstetrical forceps and well-filled saddlebags are past and the pendulum has swung far over in the direction opposite to simplicity. Too far, perhaps, for in most towns, and the large villages at least, it is the man who makes the greatest display of apparatus and books who wins off-hand the reputation for professional sagacity.

Second-Hand but Awe-Inspiring Wisdom

It is not at all unusual to see an advertisement in the medical journals calling for medical books by standard authors too old to be of real value for reference purposes but well-enough suited to "fill out" the library shelves. The young doctor, quick to recognize the requirements and unable to supply himself with scores of standard works (which he may never take time to read) buys several hundredweight of awe-inspiring tomes, places them behind glass doors where he who enters *must* see, and then tries to live up to the spurious reputation he thereby secures of being a "wonderful scholar."

Unfortunately for the average graduate some men entering practice have abundant means at their disposal and are thus able at the very outset to outfit their offices with

all the paraphernalia offered by the "physicians' supply" houses.

The public has been learning fast of late years, and having read of the wonderful cures secured by the use of hot air, the electric cabinet, violet rays, high-frequency current, vibrator, "ozonator," and "therapeutic lamps," are disposed to rush violently toward the office of that practitioner who shows the greatest amount of apparatus.

The out-and-out advertising specialist long ago surrounded himself with appliances of every conceivable kind—profiting thereby accordingly—and the most conservative physicians in established practice have found it essential to install at least a good vibrator and either a static machine or a wall-plate. In many instances the huge glass plates never revolve—somehow the doctor "never could get the results" he was lead to expect; the vibrator vibrates with extreme infrequency—yet the apparatus serves a purpose, impressing people with the idea that the doctor *could* use electricity or vibration if their case required it, and they rest content. Of course there are many doctors who really do use their machines and perhaps secure the most brilliant therapeutic results. One practitioner installs the apparatus in order to *appear* up-to-date but continues to "practice medicine" along the lines traveled by his revered preceptor; the other is *really* a modern therapist and places in his office only such appliances as he purposes to use intelligently.

From Electricity to Hot Air!

The value of the various modalities—in the treatment of chronic diseases especially—is generally recognized, but too many men imagine they can become electrotherapists by reading the direction-slips which

come with the goods. After a few unpleasant experiences (and the loss, maybe, of a "shocked" patient or two) they acquire a distaste for electricity—and forthwith buy a hot-air machine! Used where indicated and in conjunction with other therapeutic agents, this contrivance may really prove a reputation-builder. But, alas! as a usual thing every patient coming along has to submit to a baking in this new plaything, with the inevitable result that within a month or two another appliance is added to the list of things impressive but not materially useful. It is safe to say that more than a million dollars is tied up today in apparatus standing unused in physicians' offices. And still the sale goes on, for, unfortunately, it is imperatively demanded of the doctor that he be absolutely up-to-the-minute as regards equipment.

Still, a good many thousand practitioners continue to prescribe fluid extracts, tinctures, elixirs, and the like galenicals. It is the writer's privilege to visit the suite occupied by an unusually successful practitioner who uses *all* the most modern appliances (including an ozonator and minim lamp), and in this man's drug-closet he has observed a collection of fluid extracts, elixirs, and a score or more of well-advertised "ethpharmacals;" but the only alkaloids discoverable were morphine (a goodly supply!) and quinine. This gentleman does not hesitate to state that the claims of the so-called "alkalometrist" are absurd. He himself knows, as he assures his listener, that definite results can not be secured from medicines given internally. In fact, he will tell you (when he grows confidential) that one can do very little to control pathologic processes, the main thing being to impress the patient that you *can* do something you yourself believe to be impossible. Perchance physicians of this type find their strength in the multiplicity of their therapeutic appliances. They certainly do get patients—and very satisfactory fees.

Not All Show

The young doctor, aware of these things and desiring to practise medicine honestly

and to the best advantage, while avoiding the purchase of merely impressive furnishings, needs will have to acquire several things his good old father never would have dreamed of owning. There is a vast difference between being *all* show, and presenting a good appearance; and the education of the people having progressed to a point where much is required, a certain amount of "display" would seem to be essential.

Moreover, it will richly pay the young doctor (especially if he is entering into competition with an "old-time practitioner") to familiarize himself with the rudiments at least of electro- and mechanotherapy. In nearly every village there is an electric plant; but even where the current is not available the physician can use batteries and run his plate and vibrator satisfactorily. An electrically lighted diagnostic instrument not only impresses the patient but enables the doctor himself to do better work, and in these days the man who is able to diagnose closely and then select the *right* remedy for the pathological conditions present is the man who gets results. In the long run it is the man who gets results who secures the practice. Ergo, the young doctor should, primarily, equip his office to get results. Nevertheless, as stated, it is essential, in order to get patients upon whom to demonstrate one's ability, that a certain amount of "professional apparatus" be well displayed.

Keep the Books Close at Hand

As to books, I am not quite sure that an extensive library is so essential. Such books as the doctor may have should be placed (preferably in sectional book-cases) close to his desk. It is an excellent plan, where the office is not large and the library limited, to make the desk an integral part of the library. Manufacturers list some very attractive and practical combinations of sectional book-cases and desk.

If the doctor has but one room, he should see to it, before moving in, that both walls and ceiling are papered or hard-finished in some light color. The floor should be oiled and polished or covered with linoleum. The room must be well lighted. It is also

desirable to have a closet connected. In cities and the larger towns nearly all the doctors have their office in buildings especially arranged for them, or else have them in their own homes. The country doctor, however (especially the young fellow), has to make shift with what comes to his hand, most commonly one or two ordinary rooms. Under such circumstances, to suggest the need of a toilet-room would be unkind. Still, when there is a closet connected, a commode should be installed, for use in emergencies.

A folding screen is an absolute essential: it can be used by lady patients when preparing for examination; to afford privacy to the occupant of the chair or table, to hide from entering patients soiled dressings or apparatus and similar objectionable things. The screen should be large and made of material which can be washed, imitation leather, such as, e. g., pantasote, being excellent. The white-enamel screens listed by instrument houses are—for this purpose at least—too small.

Shall He Outfit with White Enamel?

It is somewhat of an open question whether the doctor should outfit his office throughout with enameled steel furniture. Where there is a reception room *and* an operating or "work-room," the latter should always be furnished with enameled articles, leaving the reception room (in which would be the doctor's desk and library) as free from the suggestion of "surgery" as possible. Indeed, more depends upon the impression first made upon the average patient than most young men realize. When a sick person visits a specialist or enters a hospital for an operation, his courage has been keyed up to the ordeal and so the sight of all the surgical paraphernalia and trappings seems natural. But the visitor to the young general practitioner ordinarily prefers to see less evidence of operative ability. Yet, in the face of these arguments, the modern doctor fully realizes the desirability of sterilizable furniture and so hesitates to surround himself with dust- and germ-collecting objects.

The happy medium in this dilemma will be a room finished as described, and provided with one or two easily removed rugs. The desk and book-cases are of plain polished oak, as are the chairs for the doctor and the patient at his desk. An oak bench will seat waiting patients, while a small nearby table serves to hold a few magazines. A fresh supply of reading matter should always be maintained—soiled periodicals are an abomination, neither do people care to re-read the same old story each time they call.

The instrument-case should be opposite the desk, and the operating table (better than a chair) near the window. Both articles should be of enameled metal; the instrument-case will have glass trays and at least two full-sized drawers beneath for dressings, etc. An enameled washstand with pitcher, basins and irrigator is an essential, unless the room has running water and fixed toilet appliances. These articles should invariably be of white-enamel ware; the instrument-cabinet and table may be finished in any desirable style, but must be varnished or polished. If the commercial current is available, a good wall-plate giving the various modalities and a first-class vibrator should be in evidence, the wall-plate naturally being placed near the surgical table, while a "dressing stand" (glass and enameled steel) will be found useful to hold the attachments. When other instruments are to be used they can be brought forward in enameled trays; two or three of these should always be ready for use in one of the drawers of the cabinet.

For Heating Water

Some device for heating water must be installed, a gas or alcohol stove serving excellently. A supply of clean towels (small and medium size) together with two or three sheets and a blanket should be ready always. It is a splendid idea to have the washstand equipped with two uprights, one supporting the irrigator, the other a glass tank containing plain sterile water or some mild antiseptic. The doctor so equipped can, in five minutes, have his instruments boiling in the water and everything ready

for even a major operation. "Between times" the room, though it looks professional, does *not* look "operaty," as I have heard it expressed. The instruments imperatively needed are a stethoscope, clinical thermometer, minor operating case, rectal and vaginal specula, laryngoscope, nasal and aural specula, tongue depressor, applicators, set of urethral sounds, head mirror, hypodermatic and hard-rubber syringe with assorted tips, obstetrical forceps, placenta forceps and uterine curets (plain and irrigation). Other instruments will be added as necessity arises.

A few good pictures on the wall and a pretty flower-filled vase on the desk add much to the attractiveness of the office. Most young doctors (and some older ones) have *someone* who will keep the vase filled! "Someone's" picture might, quite properly, have the place of honor on the desk. Circumstances of course alter cases: occasionally the young doctor will wisely keep people guessing who the "someone" will be. His practice will not fall off during the period of suspense!

Dispense Your Own Medicine

The most important "furnishing" of all I have, intentionally, left till the last. The doctor who hopes to excel must practise *medicine*, and to do that properly he must have efficient medicines. Wherever it is possible he will dispense his own remedies, and in these days this is an easy matter. It is not at all desirable (for the young doctor at least) to "put up" liniments, stock elixirs or prescriptions calling for nice pharmaceutical work—that work belongs, naturally, to the dispensing pharmacist—but simple dilutions, tablet-triturations, alkaloidal granules and compound tablets he both can and should dispense, not alone at the bedside but from his office.

Thousands of physicians are now dispensing in precisely this way every day in the year, and these men have the satisfaction of knowing that their patients get just what they intend they should receive, and when they need it; nor are their patients able to procure indefinitely further supplies of the

remedy that "did the work" without paying a fair *quid pro quo* to the man whose trained intellect and diagnostic acumen made a correct selection possible. Moreover, if Mrs. Jones, thinking her malady precisely similar to that of Mrs. Smith, desires to take the medicine which cured the latter, she must go to the doctor for a supply—*not* to the druggist who put up Mrs. Smith's prescription; and the doctor (as is right) will proceed to give her the medicine she really requires and, incidently, will collect the fee, for which he usually has good use. It may not be so profitable for the druggist, *but* decidedly far more satisfactory for the "young doctor." If he doubts, let him try it and see.

The "Dispensing Department"

The "dispensing department" need not be extensive at first. A very small oak cabinet with shelves and a drawer or two for envelopes, vials, cartons, etc., will serve every present purpose. If the alkaloids are used, a case three feet by two feet, or less, will carry practically every essential. Bulk goods, effervescent salts, ointments, etc., can very conveniently be kept in a bottom drawer of the desk. If a cupboard be in the room, supplies will naturally be kept there. Remember, patients like to see medicines displayed, and so a neatly made oak wall-case with drop-front (which when down furnishes a practical desk) makes, when filled with bottles of alkaloidal granules and tablet-triturations, a very satisfactory showing.

After making his diagnosis, the doctor takes his seat by his medicine-cabinet, selects the bottles he desires, fills into envelope, carton or vial the necessary amount of the medicine, and places on each package a key-number indicating the drug or formula it contains. If afterward the container is returned with the request for more of the same medicine, the doctor may know instantly just what is required. Experience has proved that it takes no more time to dispense in this way than it does to prepare and register properly a prescription.

A thoroughly equipped medicine-case is the last essential. Its character will de-

pend a good deal upon the circumstances under which the doctor works. If he walks or drives, he should carry a case large enough to contain a sufficient supply of a large-enough-variety of drugs to enable him to meet any possible demand. As a rule it is impossible to say when one goes out what disorders will be encountered: today one or two drugs may suffice, tomorrow possibly a dozen may be required. Again certain pathologic conditions may seem to exist all along the line, and so the demands on certain vials may be tremendous. Hence the more commonly used drugs should be carried in greater quantity, and the condition of containers should be ascertained on each return to the office. Beside the large case, a small "emergency" case, containing a hundred doses or so of such drugs as glonoin, strychnine, morphine, digitalin, cactin, apomorphine, etc., should always be carried in the vest-pocket. The physician thoroughly familiar with the drugs it contains will find himself able to meet successfully many a dire emergency.

The Doctor's Stationery

Finally, the young doctor should supply himself with good stationery. The style of type and size of paper are matters of individual taste, but it is very desirable that economy, if it must be exercised at all, be practised elsewhere than here. Colored paper is not to be considered: professional gentlemen use only plain white or cream laid paper for their correspondence. Plain half-sheet note paper bearing the doctor's name,

office address, telephone number and office hours set in small Roman type is desirable. An engraved letterhead is of course always preferable, if a slightly greater cost is not considered, while an embossed monogram adds materially to the tone of professional stationery. Cards, statements, receipts and prescription blanks should all be of similar chaste character. The large printing concerns are always ready to supply specimen sheets on request. Large type and colored ink, like tinted paper, are sedulously to be avoided. Incidentally, if the doctor is a poor penman, as many are, he will find a typewriter a most useful piece of office furniture, both for correspondence and for preparing articles for the journals—as all good doctors do. Good small machines answering all ordinary purposes are procurable at very reasonable prices.

At this point it may be well to mention the necessity of possessing a legal account-book. There are on the market all sorts of "physicians' ledgers," but the young beginner will do well to procure one of the accepted (and legal) systems which enable him to keep plain track of a stated number of patients, daily and monthly, to the end of the year. Possessing such a book, he should see to it that his accounts are posted daily, while on the first of every month he should mail his statement. Some kind of settlement should be secured within six months. There is no merit in working hard for half a century and then leaving nothing to your widow except the now somewhat worn—
OFFICE FURNISHINGS!

"The men who try to do something and fail are infinitely better than those who try to do nothing and succeed."—The Caxton Magazine.

A New Method of Treating Prostatic Diseases

By C. S. NEISWANGER, M. D., Chicago, Illinois

Professor of Electrotherapy, Postgraduate Medical School, Bennett Medical College,
and President Illinois School of Electrotherapeutics

DUBOIS RAYMOND, in his experiments, observed that "heat coagulates the muscular plasma and brings about an *acid* condition;" also, "a muscle that is fatigued assumes an *acid* condition." Schiff makes the observation that "veratria renders the muscle rigid, unirritable and *acid*."

We know today that the anode of a continuous current attracts oxygen from the body-fluids. Oxygen is an acid maker. Therefore, the part in connection with the anode is rendered acid.

What is the significance of this acid condition of tissue?

Significance of an Acid Condition of the Tissues

It may not be new to you, because it has been discovered, as far back as 1859, by Funke and other observers, that the beginning of the death of any tissue, nerve or muscle is marked by a progressive acidity and subsequent coagulation of the muscular plasma. I have used the phrase, "the beginning of the death," but I do not mean that the tissue is going to die. I only use the phrase to express a certain condition—an underactive condition.

It is also a well-proven fact, first observed by Schiff, that all overactive conditions are alkaline, and that inflammatory lesions are due to excessive alkalinity of the part. Did you ever stop to think that your patient could not have pain with an acid condition, that it is impossible that an acid condition is absolutely *against* pain? Do not bring up the question of rheumatism, which we have been treating upon a wrong pathologic conception for a hundred years, since the deposit in articular rheumatism is not uric acid but urate of sodium, and sodium urate is not an acid but an alkali. And the same thing that causes pain in rheumatism causes it anywhere else in the human body—alkalinity.

Within the past year I have devised an electrode for the application of heat and galvanism to the prostate gland, the seminal vesicles and the female pelvic organs, which I shall describe, giving the technic of its application.

Electricity and Heat in the Diseased Prostate Gland

There seems to be no doubt in the minds of thinking physicians but that prostatic disturbances and their sequelæ are the most serious lesions for which they treat men. The symptoms are often so varied and diverse as to mislead any but the astutest diagnostician, who, not finding the gland hypertrophied, is likely to look for the trouble elsewhere.

While my former methods of treating the prostate have been productive of much good and have brought favorable comment from many physicians, they were by no means ideal.

The method I am about to mention here, however, is much superior in many respects and does not necessitate entering the urethra.

If you were called upon to treat an irritable gland that was accessible and in plain sight, the first remedy you most likely would think of would be *heat*. If you understood something of the therapeutic properties of electricity you would undoubtedly combine this heat with positive galvanism: the heat, because, as previously stated, it coagulates the muscular plasma and brings about an acid condition, which means, an *underactive* or *sedative* condition; the positive galvanism, because it also begets an *acid* condition and relieves congestion by constricting the blood-vessels.

When the prostate is the gland involved, the seat of operation is not very accessible nor in sight, therefore, if we would employ these two valuable therapeutic aids, we

must devise some special means for their application.

The Technic Explained

A two-pronged fork is a simple instrument, yet it has taken a thousand years to develop it; and although it might seem a simple matter to apply heat and positive galvanism to the prostate gland, it is not so easy to accomplish as it seems. First, because the applicator must be kept at an even temperature; and, second, the metal comprising the conducting portion of the electrode must



No. 1. Showing electrode uncovered

not come in contact with the mucous surface being treated.

The electrode I have devised and which answers the purpose admirably is shown in the accompanying illustration. It may be described as follows:

A soft-rubber rectal tube about 15 inches long and having a caliber of 32 F. has the distal end perforated with small holes for a distance of 2 3-4 inches.

The tube is fitted its entire length with a spiral wire composed of galvanized iron. To the proximal end of the spiral wire is permanently attached a metal fitting for the tube of an ordinary fountain syringe, and to this is soldered, a receptacle for the conducting cord from the battery. To the perforated end of the tube an ordinary gold-beater-skin condom is firmly tied so as to include all of the perforations within the skin bag.

The fountain syringe, containing about one quart of normal salt solution at a temperature of 125°F. is placed at an elevation of about six feet.

Place the patient in Sims's position with the usual wetted pad on the abdomen attached to the cathode of a continuous current. After having thoroughly wet the skin bag, inside and out, force out all the water through the perforations, lubricate well and

introduce into the rectum to cover the prostate. Slip the rubber tube from the syringe over the end of the electrode and allow the hot water to run until the bag is filled. Now fasten the tip from the anode of the battery into the receptacle on the electrode and turn on current until 30 to 40 ma. is reached. Continue the sitting for ten minutes, and repeat three or four times a week.

It is always best to have a "cut-off" on the syringe tube so as to allow only a sufficient flow of water to fill the bag, otherwise



No. 2. Showing electrode with skin bag attached filled with water

the pressure is liable to break it. The patient is always able to tell when the bag is filled.

A few cases from actual practice will serve to illustrate:

Case 1. Mr. M. B. J., aged 82, dairy farmer; veteran of the Civil War; had never missed a day's work from sickness until six months before coming for treatment, when he gave up business altogether. Upon examination I found the prostate gland symmetrically enlarged to the size of a small orange. Two strictures in the pendulous urethra had been treated by gradual dilation until he had an infected bladder. He was obliged to urinate from seven to ten times during the night. I treated the cystitis with hot boric-acid irrigations and reduced the strictures by electrolysis, at the same time using the heat and positive galvanism to the prostate as has been previously described. He improved very rapidly and was provisionally discharged in five weeks. He writes later that he is entirely relieved and has resumed business.

Case 2. Mr. B. J., aged 79; attorney; general health fair; micturition very frequent; bowels very constipated; no other complications except extreme nervousness. I applied heat and positive galvanism to the gland for ten minutes four times per week,

using 40 ma. Gland of normal size and consistence, with subsidence of all other symptoms, after two months' treatment.

Case 3. J. A., physician; aged 45; chronic inflammation of the seminal vesicles with partial impotence for several years; no sexual desire; prostate gland not much enlarged, but sore and irritable. I administered three treatments per week of heat and positive galvanism, resulting in complete cessation of all symptoms in two months.

Case 4. Mr. A. K., aged 40; politician; decidedly neurotic; said he had been treated for stricture for nearly two years and was still taking treatment, but was much discouraged; had a colorless discharge which the advertising doctor told him was semen and that his "life blood" was ebbing away. Upon examination I found the discharge to contain no spermatozoa, but was simply irritable rectum.

prostatic fluid. The prostate gland was somewhat enlarged and very irritable; urethra very hypersensitive; prostatorrhea. As a No. 32 F. sound could be easily passed, I concluded there was no stricture. I treated him with the heat and positive galvanism four times per week, using a weak solution of cupric sulphate in place of the normal salt solution. He was entirely relieved in five weeks.

There are several points that may be emphasized regarding the treatment, namely: The solution used in the skin bag may contain any desired medicament to be used cataphorically. The treatments are easily administered if you are prepared to give them. They are of the greatest value in treating an irritable retroverted uterus. Enuresis yields quickly to them. They are indicated in any lesion dependent upon an

The Young Doctor and the World

A Confidential Talk with the Recent Graduate

By WILLIAM FRANCIS WAUGH, A. M., M. D., Chicago, Illinois

Dean of Bennett Medical College

AS spring opens, the bees get ready to swarm and the colleges prepare to send forth their new brood of graduates. Laugh as we will at the haughty youngster with diploma under his arm, who stands on the top step of Alma Mater's stairs and looks forth on the world with fearless heart and conscious readiness for the fray—joke him on his lofty expectations, we yet respect him for his aspirations, envy the powers and possibilities of his ebullient youth, and heartily wish him all the success he expects. There is ever a delightful possibility about youth. The coming avatar may stand before us; and among the crowd of youths, ready and eager to lend their aid, there are surely some Emersons, Edisons, Roosevelts or Burgraves, who may give the slow old world a notable push along the road of progress.

The newly graduated doctor will find opposition in plenty, and that of kinds that will make him hot under the collar, for he will realize that justice is not being meted out to him, and the excuses that seem valid to him receive scant attention from others. The young doctor will soon realize that the possession of qualifications is of little avail unless he finds means of letting people know of them. Yet this must be done ethically. The older men already in the field will be ready to seize the slightest pretext to set him down in the public estimation.

Don't get angry—just think how you would feel and act in similar conditions. Yes, you get hot right away, and say that under all circumstances you would give your competitor a square deal. But papa's dollars are still keeping your pocket warm

—wait till you have nothing to jingle but keys; and the rent due.

Study the code of ethics to guide your own steps rather than to pick flaws in the other man. Act up to the Golden Rule. Speak naught but good of man or woman; and if their deeds are evil, try to find excuses for them. No man can talk against one who speaks only good of him, and some day you'll need excuses yourself.

Be circumspect, especially with women. Innocence is not always a sure guard, and the appearance of evil may blast a career. Act as knowing that somebody is watching for a chance to find fault and to put the worst construction on your acts; but never neglect your duty or shirk it through cowardice. "Be just and fear not."

How to Win Reputation

The best way to win reputation is to deserve it. Be honorable, and scrupulously honest in the slightest thing. The habit of honesty grows; its cultivation and that of truthfulness develop character; and the shafts of malice fall harmlessly from one we know to be incapable of the meanness charged. Begin with the determination that you can have carved on your tombstone these words: "I have never knowingly wronged any human being."

Location

Drop any thought you may have of finding a location where there is no doctor. A man wrote to me about the time I was graduated, telling me there was no doctor within twenty-five miles, and one was needed badly. He had boarded the last one; also, he had a number of medical books he would like to sell. Even in my inexperience I recognized the tragedy and sheered off. Two doctors in a place will get more practice than one. Ten in a town will attract patients from miles away, for there must surely be one good one among so many. If there are but few they stay in town; if many, they cover the country round about.

Practice comes quicker in smaller places; it is very slow in the city, unless the young doctor has the great good fortune to be

taken in with an older man. By all means settle in a growing, developing neighborhood, not in a moribund, decaying, retrograding place.

Specializing

It was formerly the custom for a doctor to do general practice before he adopted a specialty, and this is the best plan yet, although it seems slow to Young America. Howard Kelly started the quick method, commencing to do oophorectomies before the ink on his diploma was dry. The special organs are all parts of the body, and a knowledge of general conditions is essential to correct specialty work. The eye and the uterus command the greater number of specialists, hence must offer the most opportunities. Good aurists are extremely rare, and deafness is far too common. Nearly everybody offers work for the nose and throat man. Rectal cases flock to quacks because so few regulars treat them skilfully. Genitourinary cases go to the druggists mostly, because too little attention is given these maladies by the general practitioner, and it is a "give-away" to resort to the specialist.

For all specialties the best field is the smaller city or larger town, unless one can get in with an established man in the metropolis or on the staff of a college or hospital. Some men do well by starting in a small town where they secure a following, then move to a larger one, near enough to be in reach of the former, and thus widen their sphere.

Advertising

How to "advertise" *without* advertising, or better, how much one may advertise without being unethical, is the serious problem. The customs of a community control. In Paris the doctor may not put out any sign. In Philadelphia the sign must be very small and inconspicuous. In many of the smaller towns each doctor carries a card in the local paper. Thus, follow the rule of the place.

Meanwhile, get acquainted and make friends. Join the lodges, go into every

public movement, take a full man's part in affairs. I can not get over the feeling that to use the church for business purposes is sacrilegious; yet if a man is a church-member by conviction, it is right for him to be active and useful in the work, and to render services to the church's poor. It is different with society; for what is it for, if not to get people acquainted, so that each may find those congenial to him as associates.

Business

More physicians fail on the business side than those of any other calling. Necessarily so; for sickness demoralizes the household finances, cutting off income and piling up expenses and debts, so that we too often find our earnings due from patients treated swallowed up in the ensuing family bankruptcy. We err by putting too low a valuation on our services, also in not demanding payment at once from strangers. One doctor I know of used to ask for his fee on entering the house of an unknown patient. If excuses were made, he would say: "Your neighbors, who know you, will advance the sum. If not, you can't expect me, a stranger, to trust you when they will not." With that he would take himself off. His fee was twice that of his competitors. Result: they got the deadbeats. But if anybody was very ill this strict man was called in, and he always got his money. He was taken on his own valuation.

To make this an inflexible rule would be heartless cruelty; yet I have known no cruelty so heartless as that of patients who had had good service, were able to pay and would not, laughing in the face of the doctor, desperate in his need of money. Be not silly—neither brutal. Respect yourself, charge well. But be not greedy, nor grind the needy. Also, collect while the gratitude that opens the purse is yet warm.

Equipment

In my student-days a druggist gave me a catalog of Charles Ellis' of Philadelphia, in which I found a one-hundred-dollar outfit suggested for the physician. I studied

this, asking why each article should be selected, in what diseases it could be used, the frequency of such diseases, the doses; and the quantity likely to be required; also the best preparations. Then I took the Dispensatory and studied up each article, asking whether it might be added with advantage; comparing, cutting out, and so on, until I had prepared a one-hundred-dollar list of my own.

That sum would be enough today, so far as drugs alone are concerned; but even a beginner may spend a thousand dollars in his equipment, without counting an automobile. The drugs are not now the ancient crudities, but a wall-cabinet, with large and small carrying cases, filled with active principles and pure chemicals, ready to use, perfect in preparation, and keeping virtually forever without deterioration. By excluding the useless dirt we are able to carry 30,000 doses in our overcoat pocket-case—and that is enough if well selected. In the 108 vials we may, by utilizing granules and tablets, or different colors, include an assortment of 216 remedies; and even a very careful prescriber can get along with that number, when supplemented by his office supply.

Besides, the doctor must have his emergency, surgical and obstetric cases, and such an outfit of electric and other apparatus as his special inclinations or opportunities suggest and his purse affords. These things are good to draw trade, and capable of affording great benefit if employed understandingly.

One ought not to lay in an expensive outfit of useless things, to gather dust, to be always out of order when needed, and to become obsolete in a few years and fit only for the scrap-heap. Buy what you need as you need it, and *only* what you need; then get the latest and best.

Same as to books. Get them as you need them, but always have on hand two to four new ones, to keep up with the advances. Get a few journals, but not more than you can read. One good weekly and three or four good monthlies of the sort that give you the most help when you need it will keep you up in recent advances and

afford you an opening for your own work. For you must begin at once to record your experiences and your beliefs and put them before your fellows. Few realize how it clarifies one's ideas to submit them to the great big public. A few rude bumps render us cautious; we study before we speak, and try before rushing into print; we do better work, and we learn more than if we keep

quiet and fence ourselves in. By all means take your local journal, read it, write for it, and realize that as it represents the local profession you are included, whether you support it or not. See that you get into the composite picture.

And after all this good advice, I am morally certain each and every one of you will just do as you darn please—and I'm glad of it.

The New Doctor's Opportunity

Or, Medical Emergencies and How to Meet Them

By W. C. ABBOTT, M. D., Chicago, Illinois

JUST now there is a stir and stress in the medical colleges, and a new brood of doctors is preparing to swarm. Where each will alight is a question, but it is safe to predict that, following the universal law of animate creation, the location of the queen bee will decide the choice.

It may also be taken for granted that the field for the exercise of his profession will be found already fully occupied. Darwin said there was not anywhere to be found a location where animal or plant could secure a foothold and a living, but several competitors would be found engaged in a conflict, *a l'outrance*, to secure or maintain their hold upon it. Man is by no means exempt from this struggle for existence, for is he not part and parcel of animate nature?

The Struggle for Existence

The fellest fight is that between man and man. Our pioneer fathers felt the competition of their nearest kin so deeply that they deserted civilization and all therein implied, turned their back on home, relatives, luxuries and comforts, and dared the savage wilderness with all its loneliness, its perils known and possible, in the effort to escape from the struggle.

Rifle within reach they felled the forest, broke the soil, planted crops and reared their shelter, standing off the wild beasts and wild men, and built their homes, only

to find that others followed the trail they had blazed, and in a few years they had again to set out in search of what they denominated "elbow-room," that will-o'-the-wisp, freedom from the necessity of struggling against the encroachment of their kind.

Go where he will, the young graduate will find the doctors already there quite decided and unanimous in their advice for him to "move on;" there are more there already than can make a living. Statistics show that America has about one doctor to each six hundred people, double the proportion in Europe. But statistics fail to add that much more is expected of the American doctor, and that people resort to him for more maladies than in Europe, in some parts of which the doctor is only called by the common people when the patient is at the door of death. To care for the health of six hundred people properly is work enough to keep any doctor busy.

Now—Your Shingle Is Out!

To return to our beginner—he has settled down, opened his office, hung his shingle out, and—what then? Let him ask himself the plain question, why should anybody call on *him*, when there are available men of experience already known, who have established their reputations by years of faithful service? The answer should be,

the new man's opportunity will come when there is a sudden need and the others are out of reach.

Sudden needs, emergencies, as a rule give the new man his opportunity; hence it behooves him to consider what emergencies are likely to occur and how he may best meet them.

On such occasions every near-by doctor is usually sent for, and the one who gets the case is he who reaches it first, best prepared to meet the emergency. I once took a lucrative case from another doctor; it was an attempted suicide—throat and wrists slashed—and the other doctor was armed solely with pencil and prescription pad. I had my ready-for-anything outfit, both of instruments and medicines, right with me, and was applying ligatures to the spouting arteries long before his sent-for apparatus reached the battle-field.

Have Emergency Case Ready

The emergency-practice case should be carefully selected, filled, and held ready to be grabbed at an instant's notice, without waiting to find any essentials: A small instrument-case, with every instrument in perfect condition; a hypodermic syringe in good working order, with tablets of hyoscine, atropine, strychnine, apomorphine, pilocarpine and H-M-C; a fountain or bulb syringe; bandages and gauze, antiseptics, tourniquet (if in a manufacturing community where accidents are common), plaster, and a head-reflector; a bottle of anesthaine or other good local anesthetic; and a case of concentrated remedies, preferably the active principles, in shape for instant administration.

The liquids were always objectionable, as liable to leakage or breakage. My first case had a bottle of brandy—but somebody drank it. I substituted aromatic spirit of ammonia—it blew out the cork; carbonate of ammonium—it evaporated; then, seeing the light, I depended on glonoin, strychnine and capsicin and had no further trouble. The hyoscine-morphine-cactin tablet has banished the cans of ether and chloroform, and saves weight and bulk, as the

strychnine, glonoin, and digitalin have the brandy, besides being useful in many other ways.

Some Emergency Remedies

The selection of remedies depends on the emergencies to be met, depending upon environment and condition. What may they be?

Asthma.—Apomorphine or hyoscine, morphine and cactin hypodermically; glonoin, hyoscyamine and strychnine.

Asphyxia.—Glonoin, hyoscyamine and strychnine.

Childbirth.—Forceps, strychnine, atropine, H-M-C, ergotin, quinine.

Chills.—Pilocarpine, atropine, "antispasmodic" (glonoin, hyoscyamine and strychnine).

Cholera.—H-M-C, atropine, calomel, zinc sulphocarbolate.

Choking.—The bolus usually lodges in the pharynx and can be easily removed by the finger and thumb, or by an apomorphine hypodermic.

Collapse.—Glonoin, hyoscyamine and strychnine, hypodermically.

Colics.—Glonoin, hyoscyamine and strychnine (antispasmodic triad) or H-M-C.

Convulsions.—Pilocarpine, apomorphine, calomel, H-M-C.

Croup.—Calcidin, apomorphine.

Delirium.—Veratrine, gelseminine, H-M-C.

Drowning.—Glonoin, hyoscyamine and strychnine (the antispasmodic again).

Fainting.—Antispasmodic, digitalin.

Fevers.—Veratrine, aconitine, digitalin, strychnine, gelseminine, quinine.

Hemorrhage.—Atropine, veratrine, glonoin.

Hernia.—(Strangulated)—Antispasmodic triad or H-M-C.

Hysteria.—Apomorphine, gelseminine.

Indigestion (acute).—Calomel, hyoscyamine, strychnine.

Insomnia.—Hyoscine, gelseminine, digitalin, apomorphine, calmine (a compound tablet).

Neuralgia.—Glonoin, hyoscyamine, and strychnine; gelseminine, aconitine, veratrine.

Pain.—Gelseminine; glonoin, hyoscyamine and strychnine; H-M-C.

Diarrheas and Dysenteries.—Calomel, atropine, zinc sulphocarbonate, emetin.

Sunstroke.—Veratrine, aconitine, gelseminine, atropine, the triad (glonoin, hyoscyamine, and strychnine).

Vomiting.—Calomel, zinc sulphocarbonate, atropine, emetin, small doses of H-M-C hypodermically.

Gathering up the remedies suggested we have the following list: Apomorphine, atropine, aconitine, calcidin, calmine, calomel, digitalin, elaterin, emetin, H-M-C, ergotin, glonoin, gelseminine, hyoscyamine, hyoscine, quinine, strychnine, veratrine, pilocarpine, zinc sulphocarbonate.

Six of these are in the hypodermic case. Quinine, zinc sulphocarbonate and calmine would best be carried in separate bottles as they are too bulky for the small granule vials; but the other twelve fit nicely into one of the little vest-pocket cases, bottles containing 100 granules each, except calcidin, which should be in powder, in 5-grain capsules, or they may be carried in the smaller vials of a larger, more convenient practice case which will also afford room for those of larger bulk.

'Knowledge and Skill Necessary

Here we have a complete outfit of the remedies that act most effectively and most quickly in any of the emergencies to which one is at all likely to be called. The other essential is the knowledge and skill necessary to utilize them. I am necessarily leaving out the resources to be found in every household: acids, alkalis, spices, mustard, oil, flour, etc. It's a poor sort of doctor who can not improvise a splint or other temporary dressing out of material at hand.

The "antispasmodic" combination of glonoin, hyoscyamine and strychnine is so frequently indicated that it is advisable to have it in a single granule for speedy administration. Glonoin relaxes vascular tension and sends a flood of blood to the brain; hyoscyamine prolongs and deepens both actions; while strychnine arouses the vital

forces, restores central control, and energizes all the vital functions. This makes the combination available in a multitude of cases.

In *apoplexy* one must learn to decide quickly if the pulse must be relaxed with veratrine or venesection, the bleeding stopped by atropine, or the vital functions sustained by strychnine.

In *asthma* the paroxysm may be relieved, sometimes, by the application of ice or mustard over the pneumogastric in the neck (it always helps) or more promptly by a hypodermic of H-M-C or apomorphine, or by the glonoin, hyoscyamine and strychnine combination.

The treatment of *asphyxia* depends on the cause; the preceding fills many needs. Strong support should always be given and elimination should promptly be instituted.

Chills may be aborted in the strong by a full dose of pilocarpine, inducing sweating at once; in the weak by giving enough atropine to forcibly dilate the cutaneous capillaries; in either case relaxing tension and relieving the internal congestion.

Choleraic attacks give way to the hyoscine-morphine combination; the vomiting stops under calomel if the cause is local, gastric, or as the excited pneumogastric comes under the quieting influence of atropine. Mycosis is subdued by the sulphocarbonate. In systemic cases prompt saturation with calcium sulphide is called for and elimination always, with full doses of the bacillus bulgaricus.

The numerous medical indications occurring in *childbirth* are all provided for in the little case.

Collapse and debility in any alarming form are simply met and relieved, *cito, tuto et jucunde*, by the glonoin, hyoscyamine and strychnine combination.

Colics are also relieved by the same triad (or H-M-C) whether ordinary hepatic, renal or lead; and the cases not so relieved should be subjected to surgical treatment without delay.

Convulsions may be toxemic like eclampsia, demanding pilocarpine and veratrine; or digestive, calling for emetin, apomor-

phine or calomel with saline to follow, or nervous, demanding apomorphine or gelseminine; or one of the two powerful triads, hyoscine, morphine and cactin, or glonoin, hyoscyamine and strychnine.

Croup in its earliest hours calls imperatively for calcidin, 1-3 grain every five to ten minutes; later for apomorphine, emetin or veratrine to loosen and remove exudates. Clean out the bowel promptly.

Delirium, if high, needs gelseminine; or veratrine, if toxemic, or if anemic glonoin, atropine and strychnine.

The remedial treatment of *drowning* is the antispasmodic triad to send blood to the head and arouse the suspended nervous activity.

Fainting is cerebral anemia—the preceding triad stops that. Remember that nearly all remedies, except aconitine, for prompt results, may well be given hypodermically. Stomach action in many conditions, especially when this issue is involved or on a strike, is all too slow and undesirable cumulative results too often follow.

Fever demands aconitine and digitalin; the one to relax the spastic vessels, the other to combat the paretic ones; adding veratrine in sthenic, toxemic cases, strychnine in asthenic forms, quinine for periodicity. And always elimination with the salines.

Hemorrhage requires glonoin to send blood to the head at once and stop fainting; veratrine to moderate vascular tension and excited heart action; atropine, to full effect (this is absolutely essential) to stop the loss of blood.

The value of a full dose of *hyoscyamine* with strychnine to follow, in the treatment of strangulated and irreducible *hernias* is one of the things that cannot be appreciated without a trial. But a trial is one potent means of promptly opening the mind to realization of the tremendous possibilities inherent to the applications of the alkaloids.

Hysteria is not a diagnosis, but it must be relieved and immediately, and then we must seek for and treat what underlies it; but a hypodermic of apomorphine puts a stop to a lot of pure cussedness, or its feminine equivalent;

gelseminine holds sexual impulses in check and relaxes tension, mental and moral as well as somatic.

Acute *indigestion* stops with a little calomel every fifteen minutes; fermentation ceases under calcidin and the sulphocarbolates; acid fermentation is promptly albeit temporarily relieved in its expression by alkalis (as sodium and xanthoxyl compound), is controlled centrally and effectively by atropine, and gastric motility is aroused by strychnine.

Insomnia calls for a study of vasomotor conditions. How beautifully veratrine brings rest by eliminating toxins; digitalin by restoring normal tone to the cerebral vessels; gelseminine quiets spinal and sexual irritability, reflexes and pain; solanine provides the needful cerebral anemia; or hyoscine restores the nervovascular equilibrium; while caffeine valerianate removes the sense of fatigue, somatic or psychic, that inhibits slumber. Calmine is invaluable in all cases for relief while the real cause, often yielding to sleep, is being sought for and treated.

In *neuralgia* we have a specific for the cutaneous vascular spasm and centric engorgement in the glonoin, hyoscyamine and strychnine triad, while veratrine, aconitine, gelseminine, quinine and laxatives find their indications in the study of various cases.

The treatment of *pain* in general would require a book for its adequate discussion. There are no varieties that will not give way to these remedies properly used, except the pain of actual structural constriction, which demands mechanical relief.

Poisoning requires acids (vinegar, lemon juice), alkalis (soda, magnesias, chalk and lime), demulcents (eggs, milk and flour), evacuation of the stomach, dilution, antidotes, anodynes, supports.

Irritation of the bowels calls for removal of the irritant; soothing, rest, quelling pain, quieting peristalsis, checking abnormal excretion and reestablishing normal secretions—all amply provided for in the little case.

Sunstroke requires the application of cold; with veratrine, aconitine, gelseminine or pilocarpine in sthenic, toxemic forms; glono-

in, hyoscyamine and strychnine in heat-exhaustion.

Vomiting stops if the irritant is ejected under emetin, toxins neutralized by calomel, the irritated vagus soothed by atropine, toxemias lessened by pilocarpine, mycosis stopped by the sulphocarbolates. Morphine, hypodermically, in small doses for immediate relief.

Other indications will occur to each reader—especially when he gets to work. There's no end to the fool things humanity will do to itself, and the observations of "the humorous yeggman" are commonplace rather than exceptional. But one may go many years without meeting any sudden call that requires treatment beyond this little case's capacity, when added to the resources to be found in the household, and applied with

the dexterity that comes from knowledge of disease, of remedies, and of men.

The practice-case, unless combined with this, as earlier suggested, is of course more comprehensive. It should be much larger, carrying more vials and more of a kind, as varied as conditions demand, and should likewise be ready, while the emergency outfit described may well be accommodated in the roomy pockets of the usual man, or the ever-present handbag of our sisters in the profession.

Be prepared for what usually comes in a rush—to know what to do, have the means at hand, and then do it.

Many a young doctor's success dates from the day(or night) in which he handled an emergency case with promptness and dispatch.

A Case of Puerperal Eclampsia

Having a Fatal Termination

By F. J. BALDWIN, M. D., Merriman, Nebraska

MRS. B., a primipara, thirty years of age, of slight but rather firm build, called me, on March 12, on account of morning sickness. She had gone some two weeks over her period. I told her she was pregnant, and gave her bismuth subnitrate and cerium oxalate, also some saline laxative. Called up on the telephone about three days later, she informed me that she was much better. Did not hear from her again until August 24 at 10 a. m., when I was to come at once, the woman being asleep and could not be awakened.

The Woman Found in Coma

I found her in coma, with a hard-tensioned pulse of 95 per minute; the breath was foul and tongue coated; water had broken. The husband informed me that she had been feeling good on Sunday, bowels had not been constipated at any time, and she was passing a normal amount of urine. He left early Monday morning for his work and did not see his wife again until called

Tuesday, the same time as myself. I had been there only about ten minutes when the patient was seized with a hard convulsion. So I at once telephoned to Dr. Evans, at Cody, Nebraska, for counsel, who, however, could not get there until four o'clock that afternoon. Meanwhile I gave a hypodermic injection of veratrine, 4 granules, and inhalations of chloroform, washed out the bowel with copious amounts of hot salt solution, and put her in a hot-pack as soon as possible. Examination revealed the os quite firm—could not introduce the finger—and the os and vagina were packed with sterile gauze. The convulsions lasted for more than forty minutes. I continued giving the veratrine every hour, also administered one full-strength H-M-C tablet hypodermically. At 4 p. m. the pulse was 120 but softer, respiration 30, coma deep, nevertheless she would swallow water which we put in her mouth every fifteen or twenty minutes.

When Dr. Evans arrived he agreed with me to deliver at once by manual dilation.

The nurse shaved and washed the patient, removed the tampon, put her on the table, and washed out the vagina with 1:500 chinisol. The catheter brought about two ounces of dark-colored urine. The os was softer. Working slowly, we delivered the woman, in about one and one-half hours, of a very poorly nourished seven-month fetus. Then she was put in bed, surrounded by hot-water-bottles. The pulse now was 130 and of good volume, respiration 30, temperature 101° F. We gave one ounce of castor oil, 30 minims of fluid extract of jalapa, and continued the veratrine in smaller doses.

Counsel returned home at 8 p. m. while I remained until 8 o'clock next morning. One convulsion occurred at 10 p. m., and this was the last. The patient was very restless after midnight, so I gave a half-strength hyoscine-morphine-cactin tablet at 1 a. m., after which she rested quite well, although in deep sleep. I left six 1-6-grain podophyllin granules, one to be given by the nurse every thirty minutes, followed by three teaspoonfuls of saline laxative; also tablets of intestinal antiseptic, two of these, crushed, to be given every two hours. As a result, the bowels moved ten or twelve times during that day and night (Wednesday), and the woman showed some signs of consciousness, opening her mouth when asked whether she wanted some water.

The Patient Is Much Improved

I saw her again at 7 o'clock that evening, finding a pulse of 110 beats and tension about normal, with temperature 101° F. Her urine was now passing freely, while she noticed noises around her. Thursday morning at 7 o'clock the nurse reported the patient very much better, and I ordered some buttermilk to be given. She drank a little of it but did not like it. At noon she was reported to be resting well. I saw the patient at 7 p. m., when she said she was hungry and wanted some coffee and grape-nuts; said, "I have been sick two or three days." Her pulse now was 100, tension normal, lochia normal and without bad odor, breath sweet, tongue moist and clean. I

gave another dose of jalap, continued the intestinal antiseptic and ordered grape juice with a little lemon juice for drink, she consuming about one-half glassful of the latter up to 2 in the night. This caused her bowels to move several times.

The Temperature Is Rising

At 6 o'clock that morning (Friday) the nurse telephoned that the patient's temperature was 103° F., pulse 130, respiration 30, pupils dilated one-third but reacting to light, coma deep; there was tympanites, no rigidity of abdominal muscles; lochia were normal in amount and odor, tongue was clean and breath sweet, looking similar to that seen in a very bad case of typhoid fever.

I prescribed three 1-2-grain tablets of echinacea in solution every hour, continued the intestinal antiseptic, and ordered an alcohol-bath. About 1 p. m. the nurse reported a temperature of 105° F. by rectum, and I ordered a sponge-bath of magnesium sulphate, two tablespoonfuls to one quart of water. I arrived with counsel at 3:50 p. m.

The patient's pupils were now widely dilated, pulse fast and thready (the nurse had given 1-60 grain of strychnine), temperature 105° F. We gave 1-50 grain of strychnine and 1-100 grain of glonoin hypodermically, and after a lapse of half an hour administered one granule of dosimetric trinity No. 1 every fifteen or twenty minutes for four doses, without, however, seeming to make an impression. Then the pulse began to flutter, respiration became irregular, when I left, at about 7 o'clock. The woman died two and a half hours later.

What Was the Matter?

Now, brother doctors, I want to know what more we could have done, and what was done that should not have been done. Why was this woman apparently doing so well Thursday? Why was the sudden change in temperature? There was no sepsis, of that I am sure, no convulsion after 10 p. m. Tuesday, the only one after

delivery. Was death caused by thrombus in the vessels of the brain? I am inclined to think it was. I want the opinion of readers of *CLINICAL MEDICINE*, and your own, Mr. Editor.

[It is always difficult for an "outsider" to criticize intelligently a line of treatment instituted by experienced clinicians familiar with the symptoms presented in the patient. Grossly incorrect procedures or insufficient medication can, of course, be easily recognized and justly criticized, but in a case of eclampsia treated scientifically (as was this one) we can only conjecture whether certain steps *might* have produced better results.

It would be difficult indeed to find fault with Dr. Baldwin's management. We should perhaps have pushed pilocarpine and given physiologic salt solution by hypodermoclysis while the patient was in the hot-pack. The veratrine injections might have been more numerous, and had the toxins present in the blood been more thoroughly eliminated and those remaining well diluted there possibly would have been no serious (post-partum) symptoms of toxemia. The use of the hyoscine-morphine here, we are rather inclined to think, hardly was well advised.

The urine drawn by catheter should have been examined, and the bowel flushed well with a copious enema of decinormal salt solution administered as soon as the bladder was emptied. Then the pilocarpine, elatrin, and laxative saline (with the patient in the pack) would perhaps have resulted in the elimination of toxins and reestablishment of a better condition of the body-chemistry.

From the moment of delivery the secretions should be examined and elimination *forced*, systemic antiseptics (nuclein, etc.) being pushed hard meanwhile. In eclampsia elimination of the poisons generated in the system is the main indication, even the control of the convulsions being a secondary consideration. We *can* control the seizures by the prompt and positive use of veratrine and chloroform, and then prevent their re-

turn by getting rid at once of the causative poisons.

The uterus once emptied, the one great necessity is continued stimulation of renal, hepatic and dermal activity. Shock (post-partum) will call for the use of stimulants, and strychnine is not objectionable; digitalin (or caffeine) and small quantities of pilocarpine should, however, be administered at the same time. High enemata, the laxative saline, the hot-pack, and the free use of hepatic stimulants, diuretics, and nuclein, we are inclined to think, would have prevented the unfortunate termination reported.

Still (however all this may be), one important lesson may be learned from Dr. Baldwin's case. The best way to prevent deaths from eclampsia is to prevent the occurrence of this disorder. The woman should have been told, when first seen, that she *must* present herself for examination (bringing specimen of her urine) at least once a month after the fourth month. If suspicious conditions obtain, weekly tests of the urine are not too many. Had the systemic toxemia been recognized earlier, effective remedial measures could have been instituted and mother and child would probably both be living today. When the doctor has done his part and insisted upon such periodical reports the woman's welfare rests in her own hands, and should she fail to carry out instructions and suffer thereby no blame can possibly attach to her physician.

Should proper warning not have been given, however, the position is entirely reversed and the doctor must perforce realize that he has failed to perform his full duty to his patient.

We cannot, of course, offer a definite opinion as to the existence of a thrombus, but the symptoms described would lead us to believe that this woman succumbed to a profound toxemia developing to a very great extent (and suddenly, as such conditions may) on Thursday and Friday. Discussion of this interesting case by our readers is invited. Remember that our journal is an open forum.—ED.]

Vesical Calculus in Siam

With a Discussion of Its Treatment

By **CHARLES H. CROOKS, M. D.,** Lakawn Lampang, Laos, Siam

EDITORIAL NOTE.—In the Orient vesical calculus is very common, and especially so in Siam, Burma, India and South China. According to Dr. Crooks one percent of the people of the province in which he lives have been operated upon for "stone" within the last twelve years, and probably not a third of the afflicted have been reached. The Doctor, therefore, has had a wonderfully rich clinical experience which is made the basis for this article.

VESICAL calculus is so rare in the Western Hemisphere that the surgical authorities devote little space to it and the general practitioner seldom, if ever, meets with it. In my own case I never even heard reference made to it in lectures, and when upon inquiry from a layman as to what line it would be well for me to brush up on for practice in the Far East, he replied, "Stone," which I took to mean gallstone. Consequently I arrived in Farther India without experience or even cursory study of the disease. Upon the suggestion of the Editor for an article on one of the prevailing diseases, I choose this one; but will endeavor to make it more of a "history sheet" than a didactic treatment of the subject.

Calculus Prevalent in Asia

The distribution of vesical calculus seems to be quite general over Asia, being very common in India, Burma, Siam, and is frequently reported as far north as Manchuria. In this particular region it seems to appear in districts, but this no doubt is due, in part at least, to the fears and superstitions of the inhabitants; for it requires many years to break down fear of all things western, and above all, the "cutting" of the body.

The records of the hospital at this place show that more than one percent of the total population of the province have been operated upon for stone within the last twelve years. I feel quite safe in estimating that we do not reach one-third of those afflicted. Such being the case, it would be impossible for one to shout in the midst

of a native village without at least one sufferer to reside within the radius of his voice. There would of course be exceptions, but I feel quite sure that the estimate is not too high.

As to sex, the records show that females seldom ever call for treatment, probably not to exceed three percent of all cases being females. In age the range is from very early infancy to extreme old age. Children under 18 months are not usually operated upon, but when stones of one-fourth ounce weight are removed at that age, the disease must set in very early in life. The location may be placed at the meatus urinarius and kidney, and at all intermediate points. The bladder is, of course, the most frequent point, but stones are quite often found in the spongy urethra.

The symptoms are true to those set forth by the authorities and are generally recognized by the people. In fact they are so differentiated that we never examine a child before the anesthetic is administered and all preparation made for operating, and we practically never find that we have "cleaned up" for naught. In adults an examination is usually made after the subjective symptoms are recorded, more for aid in determining the method of procedure than for discovery of the stone.

Conjecture As to Causes of the Malady

The causes of this malady are still more or less conjecture. Diet, i. e. rice, is one of the probable causes listed by most authorities, and there seems to be considerable evidence in favor of this argument, since rice is the main diet, "the staff of life" of

all the region where the disease prevails. In this particular region the rice is the glutinous variety, which is much heavier in starch than the rice known to the Western Hemisphere. The rice very often is poorly cooked, which does not add to its efficiency as an article of diet. The fact of the appearance of the disease in early infancy would seem to argue against the rice-diet theory. Although children are fed rice when they are only a very few days old, it could not truthfully be said to be their regular diet. They subsist upon the diet which nature has provided for the offspring of all mammals.

Water also is given as one of the possible causes, which would seem to account for the appearance of the disease in districts. The appearance of the disease in early infancy cannot argue against this theory so much, since children are given cold water daily from birth. Most of the specimens of concretions extracted are calcic or phosphatic in composition, hence these sediments are in excess in the excretions of the urinary organs.

The habits and environment of the people tend to frequent and rapid internal congestions. In the cold rainy season they do the hardest work of the entire year with practically no body protection. Then, too, when a perspiration is raised, there is no clothing to moderate the cooling process, hence quick and severe internal congestion must follow. The people may truthfully be said to be cold all the time. In the coldest weather, when the foreigner wears his overcoat and heavy suit, the native uses but a single blanket for covering at night. From birth to their sixth or eighth year the children wear the clothing of our first parents before "they knew that they were naked." From then to the end of earthly existence the masculine attire is a loin cloth, and that of the female is a skirt extending from the waist to the ankles. Of course the trunk is covered when "dressed up," but the routine is as above.

Food and water no doubt are contributory causes in more or less degree, but the customs and environment which produce almost

constant internal congestion, thus increasing the precipitation of the elements of urinary debris and holding them in the congested organs until the nucleus of stones too large for passage even in the normal state of the organs are formed; these again acting as constant irritants, increasing the time and conditions suitable for the formation of the stone by aggregation, is certainly also a contributory, if not the principal cause of the malady.

Methods of Treatment in Vogue

The various methods of treatment are set forth by the surgical authorities, the only effective and permanent means of relief being the surgical one, although the native usually requests medicine which will "melt" the stone. The use of any method which might offer temporary cessation of the symptoms would prove very poor practice, for should you give temporary relief to some patient, all the others would refuse to be operated upon but demand the medicine, thus causing endless and avoidable suffering. So methods other than surgical are not used except in extreme cases where the indications point to certain untoward results from surgical procedure.

The crushing operation is used by some operators, but seems to be meeting with increasing disfavor. Personally I never use it except in very extreme cases of age and disease which make the cutting operation particularly hazardous, and where the temporary relief which may be secured seems worth the while. This more, perhaps, because I have never used the method and thus lack in the manual skill necessary successfully to accomplish the operation; but I do not believe that all the fragments can be washed out through the tube, at least one can never be certain that they have been. This method is least often used of the three surgical procedures.

For stones lodged in the urethra some advocate their removal via the meatus urinarius, which in some cases is quite practicable, especially where the stone is near or quite in the opening. But in many cases where the stone has even passed the spongy por-

tion the rough projections injure the tract over the whole distance which it is necessary to move them. Where the stone has lodged in the spongy portion, it is nearly always too large to pass out and its forcible passage through the remaining length of the tract does far more damage than a clean incision at the point of lodgment. Where lodgment has taken place deep down in the spongy portion, it is not safe to incise the scrotum, but the incision may be made just in front and the spongy portion entered from the distal end. Quite frequently a pocket has been formed and the stone become attached, from which position it is quite difficult to remove it with the small instrument which must be used, usually a long-jawed artery forcep. In this location the stone is often very hard and smooth, rendering crushing difficult and also grip sufficient to effect its dislodgment. Sometimes a portion of the scrotal tissues sloughs out from the severe instrumentation.

In males over 18 years of age the perineal route is the one usually chosen, and by some operators even as early as 11 or 12 years, except in cases where extremely large stone, other disease or deformity prevent. The left (right side of patient) is the side most often selected, and for which most of the sounds are made, although there is no particular reason why the right side should not be chosen except that the actual accomplishment is not quite so easy from a question of technic.

The suprapubic is the method from necessity in males under 10 years of age, and by many operators it is the method chosen up to 15 or 18 years. It is necessary to use this method at all ages in some cases and is successfully accomplished even up to 75 years. This method is usually not chosen above 20 years except where the stone is large and too hard to crush or where disease or abnormalities of other organs interfere as prostatic disease. The operator is sometimes compelled to resort to this method after an attempt has been made to crush or to remove by the perineal route.

In females the method most practicable is the urethral, and an attempt is always

made to remove by that route. Sufficient stretching can be done to allow the passage of the index-finger and instruments and even of quite good-sized uncrushed stones. Crushing of the larger specimens will, of course, facilitate their removal, and irrigation may be used to much better advantage than in the male, since exploration for remaining fragments can be done.

The technic of the crushing operation is explained in the better surgical works, usually in full detail. Cocaine anesthesia does not produce the best results. Relaxation is never complete and the patient is never sufficiently at ease to prevent his interfering more or less with the safe and speedy accomplishment of the operation. There is always more chance for accident from broken instruments, etc., when the patient is conscious and subject to pain. The method of anesthesia is not without its decided dangers and untoward results.

Technic of the Perineal Operation

For the perineal method, after the ordinary antiseptic precautions in the intestine and those of the external body, the patient is placed upon the back and the bladder washed four or five times with a hot boric-acid solution for the purpose of rendering that organ aseptic from retained urine and also for the purpose of relaxation. The last application of the fluid is retained for the purpose of floating the stone to the neck, facilitating the passage of the sound, holding back the venous supply, and for producing the "sign," the gush of fluid which informs the operator that the cavity has been reached.

A stirrup is applied and the limbs are attached to the standards; a grooved sound is passed into the bladder and is held by an assistant near the abdomen in the median line of the body for the first stage of the operation. The sound is first definitely located by manipulation through the perineal tissues, then the initial incision is made downward and outward from a point one to one and one-half inches in front of the anus just to the left of the raphe for a distance of two and one-half to three inches on

a line which passes two-thirds distant from the anus to the ischial tuberosity. After the skin incision is completed the sound is raised to a position nearly at right angles with the body and hooked firmly against the pubic bone; blunt dissection is done until the groove of the sound is exposed at the upper end of the initial incision. Into this groove the probe end of a lithotomy knife is introduced. With the lithotomy knife held in the line of the body the incision is carried through the deeper tissues into the bladder; with the knife carried down in this position the incision through the firm tissues is usually sufficient for the accomplishment of the work.

This stage of the work is the most critical, since considerable pressure must be used; should the knife slip out of the groove serious damage is likely to result to contiguous organs and vessels. With the knife held as described the resistance of the harder tissues helps to hold it in the groove.

At the "sign"—the gush of fluid from the incision—the right index-finger is forced into the cavity before the removal of the knife in order to retain the fluid for exploration; the condition of the stone and the bladder is ascertained, and the opening enlarged by the exploring finger. A gorget (large-grooved, probe-end sound) is introduced and the grooved sound removed. With the gorget acting as a retractor and a director for the extracting forceps, the removal is effected with whatever manipulation with finger, crushing instruments, etc., the particular case demands.

It is often desirable to use extensive irrigation before the removal is attempted, for the purpose of relaxation, staunching of hemorrhage and floating of the stone. Large stones are crushed if possible, and attached stones may, in many cases, be dissected loose with the finger or curved blunt dissector. In most cases it is necessary to loosen it by traction, in which case gentle and prolonged manipulation gives better results than severe instrumentation, particularly in the smaller amount of hemorrhage which results.

The shape, size and location of the stone are the guiding factors for the operator, and the facility and dispatch with which he can meet these conditions determines the final results which he will attain. Prolonged irrigation is always desirable to relieve the congestion from instrumentation, staunching of hemorrhage and washing out the fragments. Exploration for multiple calculi and for ascertaining the resulting condition of the bladder-walls must not be forgotten.

A piece of ordinary drainage tubing, well perforated at the end, is inserted well into the bladder and fastened to the skin-flaps at the upper point of the wound with a single catgut. The incision is gently packed with iodoform gauze and dressed with warm boric-acid irrigations and iodoform gauze daily. The patient can usually get on his feet at from the third to the fifth day and shows quicker recovery than when confined to the couch for a longer period.

The dangers attendant on the operation are cutting of the rectum, severing of contiguous vessels, damage to nearby organs, and hemorrhage from attached stone: all of which must be dealt with promptly and upon the merits of each particular case. The hemorrhage from attached stone often is severe, but hot irrigations and gauze packing usually serve to allay. However, hypodermoclysis is sometimes necessary.

The Suprapubic Procedure

The suprapubic operation is the method most frequently used of necessity in children under 12 years of age; also in adults where the stone is very large and hard, where diseased conditions and abnormalities of other organs prevent lower operation; and also is resorted to when attempt at one of the other methods fails. This operation is the least difficult to perform, in fact one of the older men out here has made the assertion that he could do the operation in the dark. While most of us do not feel so sure of our skill, the method is the simplest of the three and fraught with the least danger.

As a precautionary measure the calomel-santonin treatment should be used, for intestinal parasites (*ascaris lumbricoides*) are

nearly always present. They have often caused death a short time after the operation, possibly from the effect of the anesthetic rendering the worms inactive and favoring the formation of an obstructing mass. Aside from this precautionary measure the cleansing of the intestinal tract is essential, as also the removal of the parasites.

After the preliminary external antiseptic measures the patient is placed on the back with the inflated rim of the Kelley pad under his back. A few layers of a blanket or a thin pillow are usually essential under the rim of the pad to render the abdominal walls sufficiently taut for the quickest work in dissecting and also for drawing the peritoneal reflection over the bladder and the omentum out of the field of operation. The bladder is flushed several times with hot boric-acid irrigations for the purpose of rendering it clear of urine, relaxing the parts, floating the stone, etc. The last application of the fluid is retained for the purpose of separating the walls of the organ, holding back the venous supply, floating the stone and furnishing the "sign"—the gush of fluid—which informs the operator that the cavity has been reached. The fluid also aids in pushing up the peritoneal projection and the omentum from the field of operation.

The flushing catheter is removed and a blunt, short-curved sound is inserted, pushed well up against the anterior wall, hooked against the pubic bone and held firmly by an assistant. After locating the point of the sound with the fingers through



Dr. Crooks's home in Siam

the abdominal walls, the initial incision is made in the median line from a point two-and-one-half to three inches above the pubic symphysis, downward to the symphysis. If one works toward the symphysis there is less danger of accident to the peritoneum.

After the skin incision is completed, the opening through the deeper tissues may be accomplished by blunt dissection to the third layer of muscles. This layer being well differentiated, the point of the sound well pushed up and located, a long bite is taken on either side of the sound with a curved needle and large silk ligature, with the needle passing into the bladder, the two ends of the silks are cut to about six inches and caught up with a hemostatic forceps. These two silk ligatures, one on either side of the incision, are caught up with the left hand of the operator, the sound is removed, and the incision into the cavity is made between the silks. With the silks held tight, the anterior walls are prevented from collapsing and thus the fluid from escaping before the thorough exploration of the cavity and exact location and condition of the

stone are ascertained by the right index-finger.

After this the wound is enlarged to the required size and the extracting forceps introduced. The silks may now be dropped and both hands used in the extraction. The silks should not be removed until the operation is completed, for much time and patience may have to be expended in finding the opening into the bladder for the insertion of the drainage tube and packing if the silks are removed and also in reintroducing the extraction forceps, should they slip off or have to be changed.

Crushing of large stones of course prevents the necessity of very large incisions. Attached stones can be dissected loose with the finger or curved blunt dissector much more readily than in the lower operation, but in many cases it is necessary to tear them loose by traction, in which case slow and gentle manipulation gives more satisfactory results. The stone can usually be removed much quicker by this than the lower method because of readier access to the cavity; but time used in getting the long axis of the stone in line with the incision and in getting the size, shape and condition of the stone definitely in mind before beginning to remove, gives much better final results than a more rapid and haphazard operation.

After the stone is out, thorough examination for multiple calculi and to ascertain the condition of the parts must be instituted. The simple rubber drainage tubing with the end well perforated is inserted to the bottom of the cavity near the neck and attached to the skin edges at the upper end of the incision with a single catgut suture. Prolonged irrigation with hot boric-acid solution is instituted through the incision and also through the drainage tube, for the purpose of being sure that the same is open. The opening is lightly packed with iodoform gauze down into the bladder, and the silks are removed by traction on either one of the ends.

After-treatment consists in hot boric-acid irrigations and iodoform-gauze packing. The tube drops out from the fifth to seventh

day and the patient should be on his feet from the third to fifth day. The dangers attendant upon this method are perforation of the peritoneal cavity and excessive hemorrhage. Perforation seldom proves fatal, and unless the opening is very large, simple gauze packing is the only treatment instituted.

As an after-treatment for all methods of operation something to render the urine antacid is desirable. Boric acid and salol, each three times a day, answer very well; uritone acts nicely but is rather expensive. We use a tablet composed of the following: Boric acid, grs. 2; potass. bicarb., grs. 2; ext. buchu, gr. 1; ext. triticum, gr. 1; ext. cornsilk, gr. 1-2; ext. hydrangea, gr. 1-2; atropine sulph., gr. 1-500. The same acts very well as a cystitis remedy in inoperable cases.

A Few Case Records

The record of a few cases will give some idea of the results accomplished.

Case A.—Operated upon by Dr. C. Hansen. Male, buddhist priest, aged 77. Probably suffered from childhood. Suprapubic method. Stone weighed 34 ounces. For three days following the operation condition of patient was favorable. Sudden death resulted from heart failure.

Case B.—Operated on by Dr. C. W. Mason. Male, aged 65. Phimosis with pinpoint meatus. Slit open the prepuce and removed from under the prepuce three stones about the size of first joint of thumb. Total weight of the three stones about one ounce. Slight ulceration of glans. Patient returned home in less than a week.

Case C.—Operated on by Dr. C. W. Mason. Male, aged 19. Five years previously had a stone removed by the perineal method. The perineal incision formed into a fistula from which several stones were discharged and from which a stone one-half by two inches was removed at time of second operation. Soon after the second operation severe pain set in in the region of the right kidney, at which point a nephritic abscess opened spontaneously and discharged a stone about the size of a tamarind seed

(date seed). At the last obtainable history of the case both the perineal fistula and the nephritic abscess were discharging, though not much.

The foregoing are of course extraordinary and cited more for record than for practical interest. The following are selected at random from our hospital record and give a fair idea of the general run of cases and results accomplished.

Case 1.—Male, aged 47. General condition good; had suffered several years. Suprapubic operation. Stone weighed 6 drams; oval shape; mulberry variety (calcium oxalate). Incision closed in twenty-one days. Course of recovery normal.

Case 2.—Male, aged 10. General condition good; history of pain for past three or four months. Stone weighing 7 grains, very hard and smooth (uric acid), was removed from spongy urethra through incision at front of scrotum. Wound packed with iodoform gauze only as dressing. Patient was on his feet the third day. On the twelfth day a small fragment of the stone which broke off at the attachment sloughed out through the incision. Course of recovery painless and normal.

Case 3.—Male, aged 18 months. General condition good, with history of pain for the past three or four months. Suprapubic operation. Removed phosphatic stone weighing 33 grains. Course of recovery uneventful. Went home on the eleventh day.

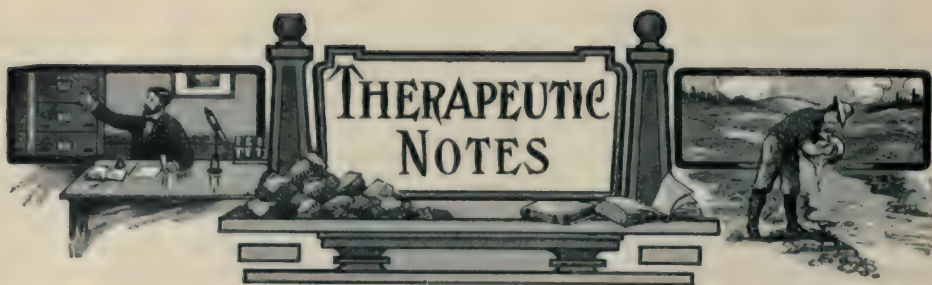
Case 4.—Male, aged 17. General condition good. Suprapubic operation. Phosphatic stone weighing 1019 grains was removed. Course of recovery normal. Went home on the sixteenth day.

Case 8.—Male, aged 60. General condition of patient fair. History of the disease indefinite as to time. Lower operation, by which a fair-sized phosphatic stone was removed. Severe hemorrhage resulted from puncturing a vessel in fastening the drainage tube, and hypodermoclysis had to be instituted. Course of recovery uneventful. Went home the eighteenth day.

For high percentage of recovery, for the relief of most acute suffering, no branch of surgery gives better satisfaction. The record of my predecessor in this hospital shows one death in 300 operations on children. A loss of 15 percent for all classes of cases in all the hospitals of this country is a high estimate.

NO lie can hurt a man for a long time. There is little use in spending your time trying to correct lies. The lie itself will drop like a feeble shaft against the armor of truth.

The thing for us to do is so to live and so act the truth that a lie will not obtain. Lies do not hurt, it is the truth that hurts, and it behooves us to see that there are no weak spots in our lives where our names may be attacked truthfully.—William C. Hunter.



UNCOMPLICATED PUERPERIUM IN MEXICAN WOMEN

Dr. Theodore F. Benndorf of Hicctencatl, Mexico (*Ellingwood's Therapeutist*, April, 1910), describes graphically the dirty, unhygienic surroundings in which Mexican women of the lower classes, attended by dirty and ignorant midwives, pass through their confinements, and from which they rise forty-eight hours later, resuming their heavy work in from two to five days. He adds that "they live on very simple diet and like the children of nature, which they are, they are sound and healthy."

The doctor is justly surprised at the easy labor in these women, who belong to a class on a comparatively low level of civilization, and at their freedom from septic infection, which is only too frequent an occurrence under much better, or perhaps, rather, under less bad, hygienic conditions in this civilized United States of ours.

The present writer believes that these people are immune against the injurious action of septic microorganisms by virtue, partly of an inherited, partly of an acquired immunity. This has been well explained by Effertz (*Wiener Klin. Wochenschr.* for 1904), who practised for years among the Central American Indians.

Effertz explained that for centuries the Indians had gone barefoot and had been exposed to manifold wounds on legs and feet in walking through the grass, through the woods and brush. The wounds naturally became infected and festered, and Effertz has often seen children whose legs presented large suppurating surfaces. With

the healing of these wounds an immunity to new infection was acquired, at first slight but gradually increasing, so that in adults scratches and other wounds always heal kindly in spite of being neglected.

Since it has been shown experimentally (in our country first by Rosenau and Anderson of the U. S. Public Health and Marine Hospital Service) that a specific immunity may be transmitted, at least to a certain degree, from mother to offspring, we may conclude that this has occurred among the Mexicans and the Central American Indians; and reasoning by analogy, we may accept the same explanation for the freedom of Mexican women from puerperal septicemia.

HYOSCINE, MORPHINE AND CACTIN IN PUERPERAL ECLAMPSIA

Dr. J. E. Moses of Kansas City, Mo. (*Texas Courier Record of Medicine*, March, 1910), was called to attend a woman in confinement who, on three previous occasions, had passed through severe attacks of eclampsia, which commenced before delivery and continued through labor. By appropriate preliminary treatment, aided by the administration of hyoscine, morphine and cactin, together with a small quantity of chloroform, labor progressed and was terminated favorably. However, three hours after delivery a puerperal attack occurred. The doctor administered full doses of the hyoscine, morphine and cactin compound and about a dram of chloroform, by the drop-method, after which the patient became quiet. The urine, which was at first drawn by catheter, was voided spontaneously

when the patient awoke, and complete recovery took place.

NUCLEIN STIMULATES CELL ACTIVITY AND PHAGOCYTOSIS

Dr. R. J. Smith of Callinston, Utah (*Wisconsin Medical Recorder*, March, 1910), has the following to say in regard to nuclein: "I have used nuclein in many conditions and found it of decided value. Its demonstrable action is to increase leukocytosis, and it invariably does so in greater or less amount according to the disease from which the patient suffers. By increasing leukocytosis we increase phagocytic action. Cell action and cell repair may become so hindered by the presence of morbid products—toxins—that the recuperative power of the organism is completely abolished. Here nuclein stimulates cell activity and phagocytosis, and normal repair occurs. It is unnecessary to state here the numerous instances where nuclein has been of advantage in the treatment of disease. The point is this: nuclein may be necessary in a given case to turn the scale toward health when the body processes do not manufacture it in sufficient quantities, and it is then of inestimable value."

PATHOLOGY AND THERAPY OF GOUT

S. A. Arany (*Zeitschr. f. Physiol. u. Diät. Ther.*, Vol. 13; through *Wien. Klin. Wochenschr.*, 1910, No. 11) has published the results of his investigations on gout, which still is a puzzling problem for pathologists and therapists alike. He assumes a toxin as the cause of the disease, which may be either of exogenic (alimentary) or of endogenic origin.

In exogenic gout the diet alone is therapeutically of importance. Since animal food, and especially food containing much nuclein, increases the formation of uric acid, it must be limited, while carbohydrates are to be recommended. Alcohol is distinctly harmful for gouty persons, and coffee also seems to exert an unfavorable effect on them, while tea is permissible; but the copious in-

gestion of milk is especially to be recommended, while fat, cheese and butter may be taken in moderation.

In acute attacks of gout potassium iodide can hardly be omitted, and the salicylates are also of use. These remedies are best given in alternation. Alkaline mineral waters are useful in gout, although their mode of action has so far not been satisfactorily explained.

TREATMENT OF FACIAL NEURALGIA

V. Alexander (*Berl. Klin. Wochenschr.*, 1909, No. 50) advises the following plan of treatment in facial neuralgia: In recent attacks active cathartics are given, diaphoresis is induced, and salicylates are administered, the patient being kept in bed and on restricted diet. If improvement does not follow in the course of a few days, the sweating process is repeated, and local heat is applied, as also, possibly, galvanization with the anode. If after six or eight days there is no improvement, aconitine is prescribed, in doses of 1-5 milligram (1-335 grain), together with a moderate dose of a laxative remedy. [It appears to us that the aconitine should properly be given from the start.—ED.] If this is ineffectual, arsenical treatment is indicated, together with injections after Schleich or Lange, or injections of eucaine solution. In case of persistent failure the affected branch of the trigeminus must be destroyed by injections of 80-per cent alcohol.

BURNS TREATED WITH TINCTURE OF IODINE

Descomps (*La Presse Medicale*, Nov. 6, 1909; through *Therapeutic Gazette*, Mar., 1910) has been using tincture of iodine as an antiseptic application in burns, with the happiest results. He begins by painting the skin around the burned area with the liquid, using a cotton pledget sufficiently small to follow the irregularities of the edge of the burn accurately. He then paints the surface of the burn with the same, touching a small area at a time. If any

part of the burn is too tender to bear the application of the full-strength tincture, he uses the compound liquor of iodine, sufficiently diluted so as not to be painful. Pain is to be avoided, as it increases the tendency to shock.

After the application is finished, a dry aseptic dressing is invariably applied. At subsequent dressings it is wise to paint the surrounding skin with the tincture of iodine from time to time, but the surface of the burn should not be touched unless there is a tendency to the formation of pus under the crusts, in which case the suppurating spots are touched again.

ALKALINE REMEDIES IN STENOCARDIAC ATTACKS

Von Chlapowski (*Muench. Med. Wochenschr.*, 1910, No. 10) recommends, in the so-called dyspeptic forms of angina pectoris, a severely limited diet, and magnesium peroxide (7 1-2 grains) after meals. Carbonic-acid baths in such patients stimulate the appetite, but thereby induce an overloading of the stomach and, therefore, lead to new mischief.

MASSAGE AS AN OCCUPATION FOR THE BLIND

Dr. L. Webster Fox (*Ophthalmology* for January, 1910) discusses the problem of training blind persons as professional masseurs. Massage seems to be an ideal occupation for the blind, and has been practised by these unfortunates in Japan for more than a thousand years. Professor Yoshimoto, principal of the Model College for the Blind in Tokio, reports that in that country the majority of masseurs are blind and that almost all the blind are masseurs. They are carefully trained in anatomy, physiology, pathology, and then in massage and in the ailments in which it is applicable.

The National Institution for Massage for the Blind, in London, has now more than sixty blind trained operators, graduates of the institution. In other European cities

also the work has been taken up by the blind, with the encouragement and support of the highest medical authorities. In New York and in Philadelphia attempts have been made in the same direction, but although the results have been satisfactory, the movement has not as yet been very successful.

PHOSPHORIZED CODLIVER OIL IN RACHITIS

J. A. Schabad (*Zeitschr. f. Klin. Med.*, 1910, No. 5) says that phosphorus dissolved in codliver oil favors increased retention of lime in rachitis, while this substance alone does not show such an influence. Sesame oil, which is often recommended as a substitute for codliver oil, does not exert any saving action on the loss of lime salts.

Codliver oil, according to these investigations, still occupies an important position among the remedies at our command for the treatment of rickets, and its favorable action is increased by the addition of phosphorus. We hold that the latter drug is best administered in the form of nuclein, which contains approximately ten percent of phosphorus. Ramacci (*La Clinica Medica Italiana*, 1909, No. 9) has found paranucleinate of iron to be particularly indicated in anemias and in rickets, in which it improves the condition rapidly and leads to a surprising gain in weight.

QUININE OINTMENT IN WHOOPING COUGH

Dr. L. Berliner (*Muench. Med. Woch.*, 1910, Feb. 15), for two years has employed quinine ointment in every case of whooping-cough which he was called upon to treat. He prescribes from 15 to 45 grains in from 2 1-2 to 3 drams of lard, according to the age of the patient. The ointment is applied three or four times daily to the nares by means of a glass rod, a piece about as large as a pea into each nostril, and in order to assure that the ointment reaches the posterior portions of the nares the child is placed on its back.

The success of this remedy became manifest rapidly at times, at other times more slowly. In several cases he was assured by the mothers of his patients that an emphatic improvement was noticeable after three or four days; in most cases, however, the author believes to have noticed that after about one week the number of attacks and their intensity diminished decidedly. Relapses occur, but yield to the same treatment. The method is the more effective the younger the child.

CONTRAINDICATIONS FOR THE USE OF THIOSINAMIN

S. Stocker (*Korrespond. Blatt f. Schweiz. Aerzte*, Vol. 39, No. 24; through *Muench. Med. Wochenschr.*, 1910, No. 11) says that fibrolysin [thiosinamin] should only then be employed when the history reveals no severe infectious attacks which heal by connective-tissue reaction. He was led to this conclusion by untoward results, as for instance in a case in which a vaccination scar and an old bony thickening showed a high sensitiveness following two doses of 2.3 Cc. (37 minims) each of this medicament.

ADONIDIN AND THYROID GLAND

Dr. Heinrich Stern recommends the addition of a cardiac tonic to thyroid gland whenever the latter medicament is to be used for any length of time. His decided preference is for adonidin. He recommends the following formula, for one compressed tablet or capsule:

Sodium cacodylate.....gr. 1-200
Adonidin gr. 1-30
Thyroid gland (powder).gr. 1

Fresh adonidin cannot always be obtained, its price being exceedingly high, but in its absence caffeine may be substituted in doses of 1-6 grain.—(*Medical Review of Reviews*, Feb., 1910.)

GASTRIC LAVAGE IN VOMITING

J. Snowman (*The Lancet*, London, Mar. 12, 1910) says that "the washing out of the

stomach with weak boric-acid or an alkaline solution is an excellent method of treating the persistent vomiting in gastric dilation or the gastric catarrh of infants."

OIL OF SESAME FOR DIABETES

Prof. Arloing recommends the following emulsion of oil of sesame for the treatment of diabetes (*Bull. Gen. d. Ther.*, 1910):

Oil of sesame.....Gm. 600
Water Gm. 300
Solution of sodium hydrate (sp. gr. 1.33) Cc. 6

From four to six soup-spoonfuls are to be taken during the day.

LOW ARTERIAL PRESSURE

Louis F. Bishop (*Archives of Diagnosis*) contributes several important studies of vascular pressure. Low pressure may occur with arteriosclerosis in neurasthenics. Neurasthenia has been termed pathologic fatigue, and one effect of this is seen in relaxation of the muscular coat of the arteries.

The best treatment for those who have developed high tension through nervous and chemical causes he finds to be fatigue by exercise.

Low pressure is found in arteriosclerosis when the causes of the latter have ceased to act. High tension is the result of a need, and if this is removed the tension relaxes, but the damage remains.

Low tension occurs late, when compensation ceases and degeneration ensues. We see the utility of high tension with persons who have lesions of some vascular area, requiring the extra force to maintain the circulation. Let the tension relax and at once trouble is evident.

These studies carry us back to the primary causes of increased tension. High tension is not synonymous with increased blood pressure. (*New York State Journal of Medicine*.)

Hemorrhage raises the former as it lowers the latter. The tension of cerebral compression is due to the demand for blood in the compressed brain. The pressure may

not fall when the need has passed but continue from habit. This is the nearest we ever come to an idiopathic hyperactivity of the pressure-maintaining mechanism.

Dr. Bishop does not believe contraction of the vessels is due to the direct irritation of toxins in the blood. There may be some impress on the local nervous mechanism. High tension may result from a need, as when oxygen is withheld.

Before attempting treatment, the blood, kidneys, metabolism and nervous state must be investigated, including the mentality. The symptoms are met by their antagonistic drugs. The diet, exercise and environment must be selected, and time given to secure the desired effects. The success of such management, he asserts, will prove a revelation to any physician who has been relying on vasodilators alone. "Most assuredly," we add, "and especially if, as is likely, his idea of 'vasodilators' is limited to the nitrites."

THE CARBOLIC-ACID TREATMENT OF BONE-AND JOINT-TUBERCULOSIS

Max Strauss (*Klin.-Therap. Wochenschr.*, 1910; through *Wien. Klin. Wochenschr.*, 1910, No. 10) has seen excellent results from local applications of pure carbollic acid in tuberculosis of bones and joints. The diseased tissue is carefully removed as far as possible. Then concentrated carbollic acid is applied and permitted to remain for one or one and one-half minutes, the healthy tissue being suitably protected. The phenol is then removed with pledgets of absorbent cotton and washed off with concentrated alcohol. The author claims that there is no danger of toxic effects from the carbollic acid.

DIABETES INSIPIDUS CURED

Einar Rohde (*Hygieia*, 1909, p. 1178; through *Wien. Klin. Wochenschr.*, 1910, No. 11) reports a case of diabetes insipidus which yielded to massive hypodermic injections of strychnine. A brewer, 39 years old, had suffered a fracture of the base of

the skull and shortly afterward a severe abdominal injury which was followed by diabetes insipidus. Recovery took place after treatment had continued for about one year, up to 8 milligrams (1-8 grain) of strychnine being injected daily. Between the separate injections several days were permitted to elapse.

CONCERNING INTESTINAL ANTI-SEPTICS

Dr. C. Kendrick of Kendrick, Miss. (*The Medical World*, April, 1910) says: "It is a matter of no consequence whether you call the remedies which are supposed to act as antiseptics (i. e., internally) 'intestinal antiseptics' or not. If they act well and do the work, and we think it is by acting as an antiseptic, while someone else thinks it has no such action, what is to be gained by discussing how a thing acts? The so-called 'intestinal antiseptics' act well in my hands, and I shall continue to use them in such cases as I think need them. It is a matter of no consequence what a little squad of men in some great university say."

THE URINE IN SKIN DISEASES

Polano (Doctorate Dissertation, Leyden, 1909, through *Wien. Med. Woch.* for Jan. 29, 1910) has made careful urinary examinations in two hundred patients, determining the 24-hour amount, the specific gravity, total acidity, amount of chlorides, phosphates, indican and nitrogen. The author has found that in cutaneous pruritus the urine is greatly diluted and poor in phosphorus, which fact explains the good effects from the administration of phosphoric acid in that affection. In psoriasis and chronic eczema he finds oliguria, increased specific gravity, hyperacidity, hyperchloruria, and an increased nitrogen coefficient. In these cases he finds a vegetable diet indicated. In *acne punctata*, *rosacea* and *urticaria* Polano has found an increased elimination of indican in 50 percent of cases; but this was absent in Hebra's prurigo. Albuminuria was present in only 2 percent of the cases.



Treatment of Cholera Nostras and of Choleric Affections with Veratrine

IN the *Zeitschrift fuer Aertzliche Fortbildung* (1909, p. 713), Dr. G. Maetzke makes a communication which will be summed up in the following:

Every year the physician finds himself in the presence of severe diarrheas which no doubt are of an infectious nature. Frequently, too, the cases do not differ from Asiatic cholera except by the absence of the comma bacillus, yet their gravity at times is very great, the prognosis very gloomy, while the deaths are not very rare. The usual treatment consists in combating collapse, cleaning out the bowel with castor oil or calomel, then calming the intestine with an opiate and arresting the diarrhea with tannin, tannigen, or tannalbin. This treatment is rational, but it is slow. Moreover, while the opium produces a transient improvement, it paralyzes the intestine and favors fermentation in the gastrointestinal canal, hence the meteorism which follows, and then we have a worse state of things at the end of the treatment than at its beginning. The castor oil and the tannalbin are well enough, but they do not compare in value with the most excellent service rendered the author by veratrine.

The employment of veratrine in cholera nostras is not new. Dr. Schulz recommended it as long ago as in 1888, in his "Precise de Pharmacologie," but his recommendation does not seem to have met with any very great approval. The homeopaths alone employ veratrum album, or white

hellebore—which contains the active principle jervine—in acute gastroenteritis.

Veratrine acts very well in these conditions provided it is administered in very minute doses. In large doses this alkaloid produces vomiting and diarrhea, but in small doses its action is surprising.

The following is a summary of Dr. Maetzke's first case treated by him with this medicament: Female, 39 years old, seen for the first time in the evening, has suffered, since morning, with severe diarrhea and vomiting. The alvine dejections became more and more frequent and looked like rice water; strength failing rapidly. Cramps made their appearance in the calves of the legs. There was cold perspiration, the temperature fell below normal, collapse threatened, and everybody was in despair. The clinical picture of this case suggests Asiatic cholera.

The case being urgent, Dr. Maetzke prescribed as follows: Veratrine, 5 milligrams (gr. 5-67), to be dissolved in 25 Grams (drs. 4 1-2) of diluted alcohol, and then diluted with 200 Grams (ozs. 6 1-2) of distilled water. Dose: One tablespoonful the first four times at half-hour intervals; after that every two hours. At the end of one hour the diarrhea was arrested and so also was the vomiting. The patient was able to take and retain a little tea. Next morning the temperature was normal and the pulse good. Two days later the patient left bed. The fifth day the stools were normal.

This astonishing success induced Dr. Maetzke to employ veratrine in all cases of acute gastroenteritis, and it never disappointed him. In one case of hyperthermia, accompanied by vomiting and diarrhea, veratrine did fail, it is true, but the case afterward proved to have been one of ulcerated enteritis, in other words, typhoid fever. In children above ten years of age small doses of veratrine also had an excellent effect. In very young infants he did not use veratrine except in one special, urgent case.

It is difficult to say what the mode of action of veratrine is. It does not produce alvine evacuations when given in the doses indicated above, but, on the contrary, it stops them at once. Besides, the doses employed are too small to act as does calomel. The presence of alcohol in the mixture described above serves to dissolve the veratrine and at the same time acts as a stimulant.

Does veratrine exert a special action in Asiatic cholera? This experience alone can determine. Inasmuch as serotherapy has not given satisfactory results in cholera, nothing should prevent us from trying veratrine whenever occasion presents itself.

A few remarks may be in order. Five milligrams of veratrine dissolved in 225 Grams of liquid will make ten large tablespoonfuls, each dose containing 1-2 milligram of the alkaloid, exactly the quantity contained in the dosimetric granule of veratrine; the latter therefore are available in treating choleriform affections. For my part I should, in such a case, alternate the veratrine with strychnine and small but frequent doses of stenol, administered in water or in very hot grog. [Stenol is a proprietary pulverulent mixture of caffeine and theobromine.] If the vomiting should be violent, then strychnine and caffeine should be dissolved in one to two hundred Grams (3 to 6 ounces) of physiologic salt solution and injected subcutaneously. The latter measure can always be used and is the one most efficacious.

The action of veratrine in urticaria, in eczema and in herpes zoster might in a way explain its action in diarrhea. In modifying

the turgescence of the affected tissues the medicament may shut the door upon them. The toxins open that door, veratrine shuts it, so that then the infection has no effect because the ground is no longer favorable for it. But be this as it may, I shall try it and then give my experience.—DR. ROBERT TISSOT, in *La Dosimetrie*, January, 1910.

ALOIN A NEW COLOR REAGENT FOR ALKALOIDS

John Lothian has observed that a solution of aloin in diluted alcohol gives, with alkaloids, a cherry-red color, ranging to purple-red. The intensity of the color is in proportion to the basicity of the alkaloid tested. It is strongest with strychnine and weakest to zero with caffeine. With acids the red color passes into orange and with alkalis into green.—*Pharm. Journ.*, 1909, p. 428, through *Apothekerzeitung*, 1909, p. 361.

APPLICATION OF IRON CHLORIDE IN INGROWN NAIL

Ferric chloride solution is recommended by Lehmann (*Gazz. deg. Osped.*, 1910, p. 71) in the treatment of ingrowing nail. Cotton pledgets impregnated with the preparation are pressed, with a little wooden stick, under the fold of skin and under the edge of the nail, and are redressed every twenty-four hours. Rest in bed for some days during this treatment is very desirable. Later on care must be had in properly trimming the toe-nail and wearing properly adapted footwear.—*Wien. Med. Wochenschr.*, 1910, No. 12.

DIFFERENTIATION OF STOMACH-ACHE

There are two forms of stomach-pain essentially distinct from each other. One is the solar-plexus pain, the other is the visceral.

The solar-plexus pain, according to M. G. Levensen, results from a hyperesthesia of the solar plexus. It is characterized by painful attacks, the intensity, duration and

recurrence of which are endlessly variable. It manifests itself in crises improperly called gastric. The seat of the pain is on the median line from the head of xyphoid cartilage down to the umbilicus, but predominantly at the pit of the stomach. These pains may come on spontaneously, or are provoked or aggravated by pressure. According to Levensen these attacks denote dyspepsia and nothing else.

The second variety of gastric pain is the visceral, and it announces the existence of some gastric lesion. It is always located somewhere in the stomach, and is felt in the abdominal wall more or less near to the Median line.—*La Clinique* and *La Dosimetrie*, March, 1910, p. 47.

BALSAM OF PERU AS A NASAL ANTISEPTIC

There would be no more precious therapeutic conquest than that which would enable us to preserve the nasal fossæ of a healthy person during epidemics of grip, meningitis, etc., and to disinfect the same during measles, scarlatina, grip, and similar attacks. How many cases of otitis, of mastoiditis, sinusitis, laryngobronchitis, and even of bronchopneumonia might not be obviated if we had such a therapeutic aid! But the problem is a difficult one to solve.

Of all the combinations proposed for the disinfection of the nasal fossæ Henri Bourgeois prefers the ointment of peruvian balsam prepared according to the following formula:

Balsam of Peru.Gm.	0.75 (grs. 12)
Lanolin.....Gm.	5.0 (grs. 75)
Vaseline.....Gm.	10.0 (drs. 5½)

This is conveniently put into a collapsible nose-tube. If this is introduced into the nose at the first appearance of a cold in the head, when one feels the posterior nares inflamed, it will abort an attack of coryza. This ointment may also be utilized in simple chronic coryza, as well as in fetid atrophic rhinitis.

The following is the method of introducing the salve: The person lies down flat on the back, introduces the end of the tube into

one of the nares and presses the tube gently, rests a moment, then presses again, and so again till he feels the salve falling into the throat. Then he rises and spits out the excess of the salve, when frequently adherent rhinopharyngeal mucus will also come away. As a prophylactic this should be done in the morning and evening.—From *Progress Medical*, in *La Dosimetrie*, March, 1910.

RECENT METHODS IN THE TREATMENT OF PUERPERAL FEVER

Dr. Neumann gives the following abstract of an article by Dr. Ottfried Fellner, appearing in the *Berliner Klinik* (21 Jahrgang, 258 H.) on the above subject. The study of the literature on the subject as well as our own experience teach us that prophylaxis gives better results than any therapy. Obstetric interference should be had only where there are strong indications for it. In touching the uterus rubber gloves should be used, and immediately previous to this the vagina should be thoroughly washed out. Small placental remnants may be left for spontaneous expulsion, larger ones being removed with the fingers. Vaginoperineal tears must be carefully sutured. When there is a purulent focus it must be treated surgically. Ligature of the veins promises good results if the thrombi are palpable. In peritonitis opium and the ice-bag, etc., do good service. Serotherapy, friction with collargol (or intravenous injections) may be tried. Dr. Fellner thinks that a vaccine-therapy possesses the best prospects for success.—*Wiener Med. Wochenschr.*, 1910, No. 12.

TREATMENT OF CARDIAC WEAKNESS IN CERTAIN INFECTIOUS DISEASES

K. Andrejew writes as follows in the *Meditinskoe Obozrenie*, 1909, VII: Cardiac activity in subjects of typhus fever and abdominal typhus is low during the entire duration of the disease and even in the first weeks of convalescence. In abdominal typhus the heart's activity is weakest at

the end of the second and beginning of the third week, while in typhus fever the heart's weakness is greatest during the second week.

The best cardiac remedies are caffeine and digitalis. Medicaments that reduce the temperature cause a lowering of the blood pressure. Baths of 27° C. (80° F.) stimulate the heart. Determination of the blood pressure according to Riva-Rocci and the method of Katzenstein enable the physician to conserve in time the reserve powers of the heart.—*Wiener Med. Wochenschrift*, 1910, No. 12.

TOBACCO AND THE ETIOLOGY OF ARTERIOSCLEROSIS

Von Paul Schenk writes, in the *Deutsche Medizinische Zeitung* (1910, No. 4), as follows: It is not the drinking of alcohol but the abuse of tobacco that is the cause of arteriosclerosis, especially the sclerosis of the coronary arteries. And the dysbasia (difficult walking) angiosclerotica also can in most cases be traced to excessive smoking. Apart from this, the thickening of the blood from an insufficient supply of fluids in the presence of overabundant food is of importance.—*Wiener Med. Wochenschr.*, 1910, No. 12.

BERTILLON'S APPRECIATION OF DOSIMETRY

In a letter from Paris, dated March 22, 1880, written by the famous anthropologist, Bertillon, to Burggraave, thanking him for a copy of the latter's "*Histoire de L'Anatomie*," in speaking of allopathy and homeopathy, he writes as follows:

"As for me, these appellations are absolutely misapplied. True medical science is neither allopathic nor homeopathic, neither spiritualistic nor even materialistic; all these are metaphysical conceptions. And allopathy did not even exist anywhere but in the troubled brains of those who named themselves homeopaths. True medicine is a scientific work which recognizes no other

methods except the scientific one; and it seems to me that dosimetry, at least so far as its pharmacopeia and its name are concerned, approaches very closely to this magnificent method.

"Be this as it may, I have the greatest admiration for men of energetic convictions who give their life to the propagation and final victory of that which they esteem true and just. It is for this reason that I beg you to accept my great esteem and sympathy as well as my best thanks."—*Reperatoire Universel de Medecine Dosimetrique*, 1880, p. 115.

INDICATIONS FOR TRANSFUSION AND VENESECTION

Von G. Morawitz writes as follows in the *Deutsche Medizinische Wochenschrift*, 1910, No. 7: In cases of chlorosis in which the iron-therapy had no effect venesection is indicated. Small bleedings, to the amount of 50 to 100 cubic centimeters (1 1-2 to 3 ounces) and repeated from time to time, may be useful. A more important indication for venesection is uremia, especially in acute nephritis. From 250 to 300 cubic centimeters (8 to 10 ounces) of blood should be withdrawn and then half a liter (one pint) of 0.5-percent salt solution injected subcutaneously. In chronic nephritis a certain amount of improvement of conditions may be obtained by this procedure, while in acute nephritis the results are brilliant.

In eclampsia, also, the results of venesection are favorable. In disturbances of the circulation, especially in the treatment of cardiac disturbances under plethoric conditions, venesection may be of advantage. So in pneumonia, with circulatory obstruction, venesection is indicated, to unload the heart temporarily.—*Wiener Med. Wochenschr.*, 1910, No. 12.

[If we live long enough to be quite old we may live to see and hear of things which we saw and heard of when we were quite young in the profession.—THE GLEANER.]



The American Medical Student

THIS number of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* is respectfully dedicated to the American Medical Student. There are many of him. According to *The Journal of the American Medical Association* there were 22,145 students pursuing medical studies in this country last year. Of these 20,554 were in attendance at regular schools, 899 at homeopathic, 413 at eclectic, 52 at physio-medical, and 227 at unclassified colleges, respectively. A year ago there were 4,442 graduates in medicine. There has been a slight decrease within the last few years in the number both of students and graduates.

According to statistics submitted at the last meeting of the Council on Medical Education there are 160 medical schools in this country, as compared with 172 in all the rest of the world. In Germany there are 20 medical schools; in France 5; in England 21; in Scotland 8; in Austria 7; in Russia 10; in Spain 9; in Mexico 1; in Argentine 2; in Brazil 3. We certainly have our share!

There is the same disparity in the number of physicians. In Europe the average is probably one physician to 1500 or 2000 people. In the United States there is one to 655, according to the figures of the Carnegie Foundation, though others make the professional congestion even greater. It should be recalled, however, that this country is the richest in the world. The average income is higher than anywhere else. The people are much more able to employ the medical man than in the old world, so resort

to him much more frequently. In spite of the large number of physicians the position of the medical man in America is far above that of his brother in Europe.

In order to get some information of interest and value concerning our coming men we addressed a form-letter to the presidents of the graduating classes of different American colleges. We received replies from about fifty. While the reports are not complete enough to give accurate statistics, they at least present facts of interest which warrant some interesting deductions.

For instance, we learn that of the members of these graduating classes more than 25 percent are degree men—graduates of literary colleges. Of the remainder many have received a partial college-course or normal or other advanced instruction. Only in a very few classes are there no college-trained men. In a few, nearly every man has an academic degree. In Western Reserve, for instance, 19 out of the 21 members of the senior class have received college degrees. If there is one thing more striking than any other about the "new" doctor it is the superior quality of his general education, as compared with that which was required from us old fellows of two or three decades ago.

More than 42 percent of the members of these classes expect to secure hospital positions. Doubtless this percentage is high, as expressing the desires of the young men rather than likelihood of the full realization of those desires; undoubtedly many will fail to secure appointment. But certain it is that a constantly increasing percentage of



A. C. BRODERS
Medical College of Virginia, Richmond



PAUL M. CURRER
College of Physicians and Surgeons, Chicago

our recent graduates are seeking hospital internships. They realize that the medical education is not rounded out without it, and that the young man who really desires to make a name for himself in medicine must have this invaluable training.

Thirty-six percent of the graduates expect to locate in the larger cities, 64 percent in the country. This probably represents a fair distribution according to population.

From one of our questions we secured some interesting replies, i. e., as to the percentage favoring self-dispensing on the part of the physician. There was a remarkable variety in the answers. In a few schools there was practical unanimity in favor of prescription-writing, in others nearly every student preferred to dispense. In the homeopathic schools 100 percent purpose to dispense their own remedies. In one of the Baltimore schools (not Johns Hopkins) apparently no one favored self-dispensing (I think the class-president did not take a vote of his classmates), but the percentage favoring it varied generally between 25 and 90 percent.

The average is closely represented by the University of Michigan, in which 65 percent are said to favor self-dispensing.

This fact, however, is to be noted: In classes in which the number of those purposing to practise in the cities preponderates, more are favorable to prescribing; where the number expecting to locate in the country and country towns is the greater there are more who expect to dispense. The influence of the medical faculty probably has a good deal to do with the predilection of the members of each class. When Professor "A" constantly presents the advantages of writing prescriptions the members of his class generally follow—till they leave college! There is no doubt that self-dispensing is becoming more general and more popular. The possibility of securing remedies which are easily carried and dispensed, that keep well, are accurately dosed, and *deliver the goods*, leads to dispensing inevitably.

Some interesting comments are elicited. Thus, in reply to the question, "What led



D. I. PAYNE
Memphis Hospital Medical College



ALLEN M. GIDDINGS
University of Michigan, Ann Arbor

you to study medicine?" one man said: "The close friendship of two enthusiastic physicians, the desire to know for myself the things they know, and the belief that our profession is the noblest of them all."

The president of the Maryland Medical class, replying to another question, said: "Our instructors have ever taught us to treat the patient that has the disease, not the disease that has the patient." While the Western Reserve man, speaking of the ideals of his school, said: "It teaches its men to consider every patient a separate individual to be studied and treated with simple drugs of known composition and action, so far as possible."

Our profession may well be proud of the young men who are entering it. They have the basal education necessary for their own success and for the further elevation of the standard of American medicine. Time was that our medical colleges did not inspire much pride, and excited some derision in other countries. That time has gone by. Our schools, the best of them, will bear

favorable comparison with any in the world. Our young men are doing their share for the advancement of scientific medicine, and the additions to medical knowledge are stamped every year with an enlarging list of names of American physicians. As a general practitioner or a specialist the American doctor is the best (in the sense of being the most practical) in the world. I say this in no boastful way, but because I believe it to be absolutely true.

On the accompanying pages you will see the pictures of some of our young men of the future. It is a portrait gallery to be proud of. Look at their faces carefully. Many of them appear in print today for the first time, but most of them (I hope every one) will be heard from again.

THE YOUNG DOCTOR'S OFFICE EQUIPMENT

I can hardly speak too forcibly to the young man starting out in the practice of medicine regarding the importance of the

equipment, care and appearance of his office. To him who has unlimited resources behind him my remarks will mean little in their specific application, for they are addressed to those who start their professional life in small communities, and particularly in towns where there is neither public water or electricity. For this reason

The way in which your superiority will be most readily manifest is in the condition and equipment of your office. Drs. Smith and Brown probably have an office outfit consisting of a kitchen table, a rusty stove, four or five broken-backed chairs, several large and overflowing cuspidors, and an accumulation of plenty of dirt. To suggest



The graduating class of the Chicago College of Medicine and Surgery makes us a call.

I do not include electric apparatus, barring a diagnostic set, for I have found that batteries are unsatisfactory for most of these purposes; neither do I include any "show-off" stuff. The general principles, however, apply to every new practitioner everywhere.

Do not, under any circumstance, let the size of the town determine your own size. If your sphere is small, resolve to enlarge its scope and your usefulness to the last possible point. If you are of only the same caliber as Dr. Smith and Dr. Brown, who are well known in the community, how can you expect to gain any practice except among the deadbeats and "floaters" who always flock to the "new doctor," to his no great professional, social or financial gain. Be a little better than the best, and let your work and your surroundings show it.

the professional character of the occupant, there are added to these a discarded barber's chair, a case with a few dilapidated books and rusty instruments, and a dark and noisome closet filled with stale drugs and filth.

As for yourself, always remember: cleanliness is cheap; *so be clean*, whatever else you do or do not do.

Make at least two rooms of your office, even if the available space is not more than 10 by 12 feet, for it is essential to have a private place for consultations and treatments.

Now for the equipment, to come within a sum not exceeding two hundred dollars:

For the Waiting Room:

One-half doz. wooden-seat dining chairs (two of these—preferably painted white—may be used in the consult- ing room)	\$ 5.00
Rocking chair	3.50

Small bookcase	2.00
Library table (on which keep interesting reading matter)	3.00
Floor covering (linoleum)	5.00

For the Consulting Room:

Roll-top desk	15.00
Desk chair	4.00
Bookcase	8.00
Filing system for case-records and accounts	15.00
Floor covering (linoleum)	5.50
Surgical chair	35.00
Compressed-air tank, with accessories..	25.00

of drugs or instruments, both of which must grow out of the needs and abilities of the individual. It is foolishness and money wasted for the beginner to load himself up with a ready-made "outfit" of drugs and instruments; these should come as needed, and only so.

I have taken it for granted that you have books and pictures, without which any office, no matter how pretentious, looks more or



The graduating class of the College of Physicians and Surgeons (Medical Department, University of Illinois) visits CLINICAL MEDICINE

(I do not recommend the expensive nebula apparatus.)	
Case for medicines and instruments (this can be made by the local carpenter to meet the needs and fancy of the individual, and will enlist the carpenter's interest)	10.00
Dressing table (glass)	5.00
Electric diagnostic outfit	30.00
Irrigator	3.00
Uranalysis outfit	5.00

This leaves \$20.00 for stove, lamps, white sash-curtains, and other minor necessities.

I have not included in this list a microscope, because it could not be got into a \$200-equipment. However, if you can afford it, buy one, by all means, for no one appreciates its value like one who has to do without. Neither have I included a stock

less like a hospital or a howling wilderness. Make your office as cheerful and homelike and interesting as you can. Give your patients a chance to forget that they are sick; do not force it on their attention by the gloomy character of your surroundings. Materially fitted out as here suggested and mentally equipped with the firm resolution to keep all clean, neat, systematic and as attractive as possible, combined with an earnest desire to do thorough and conscientious work, any young man of ordinary attainments should make a success from the start.

GEORGE B. LAKE.

Wolcottville, Ind.



S. WILMER TUNNELL
Medico-Chirurgical College, Philadelphia



RICHARD LYNCH
Barnes University, St. Louis

EMERGENCIES FOR THE YOUNG PHYSICIAN AND HOW TO MEET THEM

The editorial call in the April number of *CLINICAL MEDICINE*, for a few words of help for the young doctors about to begin their work, is timely, commendable and deserves a ready response from the more experienced members of the family.

It is a well-known fact that even the best of our medical colleges, with all their modern facilities for teaching the theory of scientific medicine, are sadly deficient in the giving of practical things such as are called for in this editorial.

I wish to write of a few of the common emergencies that are sure to come to the young doctor and how he should meet them.

The young doctor as well as the old one must be prepared to care for emergencies at all times, as well as in all places. He should bear this in mind in buying his equipment. Some operations may wait until instruments may be ordered, the emergencies never.

Obstetrical cases are practically always emergencies and most frequently come at night. Keep the obstetric bag carefully and completely packed, use it for no other work and keep it at the home. Clean and repack it immediately after every use. It should contain: Lysol 4 ounces, ergot 4 ounces, chloroform 2 ounces, benzoinated lard 2 ounces, sterile talcum powder, sterile package of umbilical tape, towels, gauze for packing uterus, gauze packer, roll sterile cotton, baby scales, pair of artery forceps, needles and ligatures, brush and nail cleaner. This is recommended as the minimum outfit for the ordinary cases.

Accidents of various kinds are likely to happen when the old family physician is out, when "most any one" will do—and the young doctor gets his opportunity. Be ready to go and go quickly. This necessitates having a small surgical case always ready. This should contain a small hand-case of emergency drugs, sterile towels, gauze, bandages, cotton, ligatures, sutures, needles, needle-holder, artery-forceps, plain

forceps, dusting powder, antiseptics, adhesive plaster, etc., with which most small accidents may be nicely cared for.

Burns and scalds are very common causes of emergency calls. An ounce bottle of picric acid kept in the emergency case will be a most invaluable aid. Apply this directly to the affected area in a strength of 1-2 to 1 percent by means of a layer of gauze or cotton. It stains a deep yellow, and may set up a dermatitis in sensitive skins, but gives prompt and decided relief. Try to learn if possible before responding to an emergency call the nature of the case, so that if it requires something not kept in the bag it may be taken along.

The chief emergency case is the hypodermic-syringe case with tubes containing: H-M-C, strychnine sulphate, gr. 1-40, apomorphine hydrochloride, gr. 1-10, atropine sulphate, gr. 1-100, morphine sulphate, gr. 1-4, cocaine hydrochloride, gr. 1-4. These tubes should be kept in the case, should never be empty, and the outfit should never be out of the physician's pocket day or night except when in use. The H-M-C is an article that may be absolutely depended upon to take care of all pains, however severe. Cases of labor may be rendered practically painless, dislocations may be reduced and fractures adjusted without assistance and with very little pain by its use.

Apomorphine is invaluable in acute gastritis, acute alcoholism and hysterical crises. Its action is prompt and sure.

In selecting and filling the medicine-case keep in mind the emergencies. Never go without calcein for croup. Always carry a little chloroform for inhalation in spasmodic conditions, especially in children. Be sure that you have phenacetin for the aches and pains associated with high temperature. The antispasmodic granule, morphine sulphate, gr. 1-4, Buckley's uterine tonic, calomel in 1-10, 1-4 and 1-2-grain-sized granules or tablets, quinine sulphate, 2 grains, aconitine, gr. 1-134, and effervescent saline laxative are standbys and every medicine case should contain them.

Now a few general rules for emergency calls. On receiving the call get as definite

an idea of the nature of the case as possible. Go quickly, but don't become or appear excited. On entering the room make the diagnosis quickly and *give the patient relief as soon as possible*. Remain until the immediate danger is past or until you can do no more.

Luckily the majority of emergency cases terminate favorably, but the manner of handling them often determines the amount of future practice the physician will do in that family and neighborhood.

Here is success to the young doctor in his first emergencies! E. E. WOODSIDE.

Johnston City, Ill.

[Some mighty good advice—and not for the young doctor only.—ED.]

THE THERAPEUTIC NIHILIST, AND A LITTLE ADVICE

A therapeutic nihilist is possessed of the bugs of unbelief, and since he is a pessimist he has no use for optimists. As the bugs of unbelief in his brain multiply, it becomes much harder for him to believe in up-to-date medication. If he had backbone of his own to investigate for himself, it would not take him long to learn what modern methods can accomplish. In all my years of practice I never knew where I was until I began to investigate for myself; after that I had it pat.

So be up and doing, doctor! Shake off your pessimistic views; be optimistic! That is proper. Pitch in and start yourself anew. The days of galenics are fading fast. Make haste and join the progressive band, for, remember, this is not a fad, but has a solid foundation upon which to stand. Get acquainted with the alkaloids by following the "Guide" of Old Doctor Shaller, for therein you will find all the points gathered by him for many a year. Now, dear brother, give the method a trial, and you will never go back to the galenics, for through it you will save many a precious life, young and old.

The active-principle therapist will become more and more in demand. And



H. M. GARRISON
Southwestern Homeopathic College, Louisville



HENRY H. JAMES, JR.
Detroit Homeopathic College

what greater bliss could God put at your command than to ease the suffering of the people! It is the gift within your hand. Surely, naught could be sweeter than to do what-e'er you can for those upon whom you call, to relieve them of their pains and ills. These will surely pray for you to God to bless you before you leave this earth; and when life's journey has ended, bringing you to your well-deserved rest, you may be sure of being remembered, for they know that you have done your best, and their gratitude will follow you.

W. F. RADUE.

Union Hill, N. J.

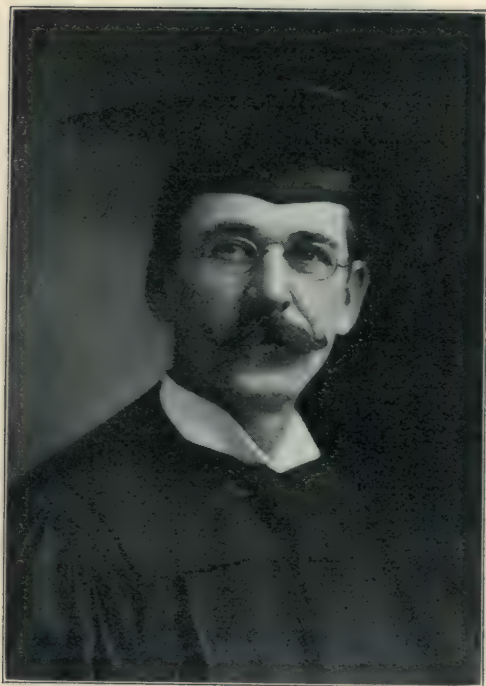
[Dr. Radue has evidently learned to appreciate the certainty of positive therapeutics. He is right. There is a great deal of comfort in being able to relieve the suffering we are called upon to treat "*cito, tuto et jucunde*," yes, quickly, safely and in a pleasant way. The certainty of action is, above all, the important point, and one which cannot be denied by any honest observer. Dr.

Radue speaks from rich, long and varied practical experience.—ED.]

CALCIUM SULPHIDE VS. ARSENIC SULPHIDE

I have had the same success with calcium sulphide as reported by others; yet I have practically discarded it in favor of arsenic trisulphide. The advantages of the latter are:

1. Smaller effective dose.
2. A far more uniform dose. You do not have to waste valuable time working up to the dose the case requires.
3. It is equally harmless in medicinal doses. It may and should be given much more freely than has been done hitherto. A milligram four times a day is a good average dose for an infant of four or five months, and five milligrams for a child of as many years. I have never noticed any tendency to cumulation of arsenic. This may be partly because it cures so quickly that I have not had to give it long enough.



J. M. ALLHANDS
Chicago College of Medicine and Surgery



ROSCOE L. DOUGLAS
Reliance Medical College, Chicago

This applies to the yellow trisulphide, not to the red monosulphide of arsenic, which is a very different remedy. The latter gives the effect of arsenic only, but is less toxic than the arsenical acid compounds. The yellow trisulphide of arsenic gives the effect of sulphur only, but is so soluble that a little goes a long way.

CHAS. F. MORRISON.

Springdale, Wash.

When we received Dr. Morrison's letter we made the following comments thereon concerning the relative advantages of calcium sulphide and arsenic trisulphide:

"In regard to the relative advantages of calcium sulphide and arsenic trisulphide, let me suggest that while the lines of usefulness of these preparations cross, it certainly is not advisable to use them interchangeably. Calcium sulphide is the remedy for acute conditions and for the more active infections, especially with the staphylococcus and other pus-germs. It also acts beautifully in cases of whooping-cough, acute

contagious diseases, and even in tuberculosis, where it is desired to saturate the patient as completely as possible with the sulphide for its germicidal effect. In using the calx sulphurata we are able to give very large doses and there is no complicating toxicity, as there may be when the arsenic salt is used.

"The special field of usefulness of the arsenic trisulphide is in the more chronic affections where in addition to the sulphur radicle there is need for a reconstructive, as in scrofulous children, chronic gonorrhea, and various skin disease, such as psoriasis, chronic eczema, etc. In many of these cases we use these two preparations together, especially in gonorrheal rheumatism.

"Both remedies are useful. Neither, in our opinion, can take the place of the other. The yellow trisulphide is generally known and listed as arsenic sulphide.

"I wish, Doctor, that you would write us a little article giving your experience with the arsenic sulphide. This is an exceedingly interesting remedy. It isn't used half as



J. ELMER CUMMINS
Atlantic Medical College, Baltimore

much as it ought to be and the 'family' should know more about it. I call on you for help for it is apparent that you have had a large experience with the preparation."

Dr. Morrison replied as follows:

"With regard to the sulphides: I started out with exactly the view that you take in your letter. My experience, however, leads me to believe that arsenic trisulphide is better than the calcium salt in acute conditions. In some cases the calcium salt leaves nothing to be desired, in others it does. In many cases the arsenic salt gets to work much quicker than the other, and it may be given in much larger doses than heretofore with perfect freedom. You have no more cause to be afraid of it than of strychnine.

"That is all I have to say about it. I now put it up to you. Have you ever given arsenic trisulphide a really fair test in acute conditions, and in large doses? If you have, I don't believe that you would write as you do. If you have not, you simply do not know the drug."

We shall have to confess that we have not tried out arsenic sulphide in acute con-

ditions as exhaustively as Dr. Morrison has. We know of its extreme value in many of the chronic ailments, especially in the treatment of gonorrheal rheumatism and other diseases of a subacute character. However, we still believe that in acute conditions calcium sulphide is the better remedy—and the safer one. Arsenic trisulphide contains 60 percent arsenic and 40 percent sulphur, approximately. We seldom desire to exceed 1-20 grain of arsenic at a dose, while we often want to give a grain of the sulphur; how are we going to accomplish the latter without a toxic dose of the arsenic, if we depend on arsenic sulphide? But we are open to correction. We therefore invite the members of the "family" to try these two remedies side by side, in exactly the same class of cases, and if they find that Dr. Morrison is justified in his views, we want them to write and tell us so. Here is an opportunity for some nice clinical work which may be of the utmost practical value.

FROM A HUSTLING STUDENT—NOW A DOCTOR

As I finish my course in medicine at the Chicago College of Medicine and Surgery I want to say a word to the boys in my own and other schools who are planning their medical literature which they now need. I believe that the student will get more information of real practical value from *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* for the money invested than he can get from any other source for twice the money. The journal is filled with original articles which are concise, right to the point and easily understood and they come hot from the field of practice. There are no long, drawn-out and mysterious theories, but a world of fact, born of actual experience. This is the kind of stuff we young men of the profession need. Too often in the schools we are surfeited with theorizing; we need to sit for a while at the feet of the older men of the profession who have been doing the work of the sick-room, and learn all we can from them.



ELISHA S. SEVENSMA
Detroit College of Medicine

The Post-Graduate Course, which Dr. George F. Butler is giving us in **CLINICAL MEDICINE**, is alone worth many times the subscription price. It contains much valuable information which cannot be found in any book or set of books, and has been very helpful to me in my recent studies, as it is one of the most attractive features to others. I know, for I have talked this course, and as a result have secured more than one hundred subscriptions to **CLINICAL MEDICINE** during the last two or three months. The majority of those who have subscribed have expressed themselves as being more than pleased with it, and I have not had a single complaint.

Juniors, why not some of you pay your tuition in your next or senior year by taking subscriptions? It is a real pleasure to represent **THE AMERICAN JOURNAL OF CLINICAL MEDICINE**, as one feels that he is giving every subscriber more than his money's worth. You can meet your patrons and fellow students afterward and they feel more kindly toward you than ever,



H. D. JUNKIN
Chicago College of Medicine and Surgery

because you have given them something that they appreciate. The **CLINIC** is a verifaction of the publisher's motto—"a square deal."

J. M. ALLHANDS.

Chicago, Ill.

[We are glad to have an opportunity to publish Dr. Allhands' letter, for one reason because it gives us an opportunity to "speak out in meetin'" and tell how much we appreciate the hard work which he and others like him are doing for **CLINICAL MEDICINE**. He is our banner agent this year, though others are doing well, many of "the boys" making a very respectable addition to the all-too-scanty fund of spending (or board-bill) money of the average senior medical student. If this comes to the eye of any junior medical student who thinks he could use an extra hundred or two next year he is cordially invited to write.

Dr. Allhands is *sure* to make good. It has been our experience that the boys who have the grit to hustle for their "coffee and

sinkers" while they are fattening their brain-cells "get there" before the race is over, though they may be outstripped at the start by those who carry no financial handicap. Luck to you, Doctor, in your new home down among the North Carolina hills! Juniors, you're next.—ED.]

SOME BACK NUMBERS WANTED

One of our oldest subscribers and best friends is trying to complete his file of CLINICAL MEDICINE. He is short the volume for 1904. We have been able to secure all the numbers except those for February and May of that year. Can any of our readers supply them? If so, we shall appreciate it very much, and the doctor will be under even greater obligations.

EXPERIENCE WITH CHROMIUM SULPHATE IN APHONIA AND ATAXIA

Relative to the use of chromium sulphate, I wish to report my experience with this drug, the first one being of especial interest, as it shows an untoward effect of the drug.

Case 1. Locomotor ataxia, paralysis of lower extremities, suddenly developed an aphonia which failed to yield to mercury or salicylates combined with local treatment. I administered chromium sulphate, grs. 8 three times daily for twelve days, when at the end of this period the aphonia showed marked improvement. I now gradually raised the dose until at twelve days (twenty-fourth day since administration began) the patient was taking 60 grains a day.

Until this time the two prominent actions of the drug were relief of the aphonia (which by the twenty-fourth day had practically disappeared) and increased flow of urine. After taking 60 grains daily for seven days he became nauseated, lost his appetite (which until this time had been excellent), experienced a taste of sulphur, his breath smelled sulphurous, and finally he began vomiting, the vomitus being green in color and of sulphurous odor. The drug was immediately stopped, and in three days the untoward symptoms had cleared up, as had

also the increased output of urine. After several days the drug was again given in dosage of 24 grains daily. There were no more disturbances of appetite, but in forty-eight hours the urine became increased in amount.

Two months have elapsed since the foregoing occurred, the chromium having been taken steadily, but there has been no amelioration of his ataxic symptoms. The aphonia has entirely disappeared, and there have been no more digestive disturbances.

Case 2. Female, aged 45. Three years ago she had a growth (character unknown) removed from her vocal cord. When first seen there was a partial aphonia, and examination showed fibrosis of the cord. I began giving chromium sulphate, 20 grains daily. For a short time there was improvement, but gradually (under increased dosage) the aphonia returned to its former state, and has continued so for the past three months.

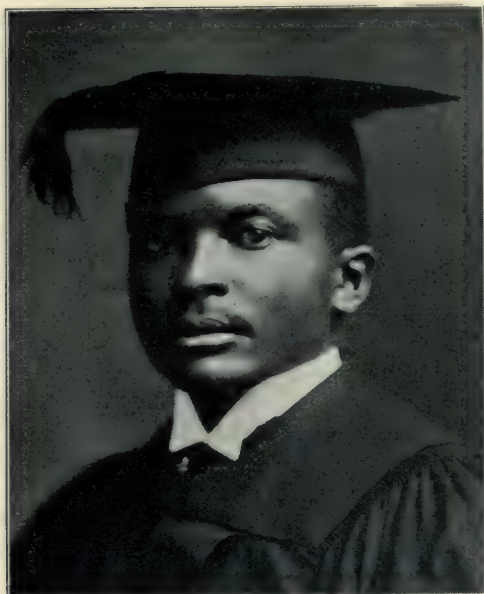
ARTHUR D. KURTZ.

Roanoke, Va.

[In about half of the cases of locomotor ataxia (as reports come to us) chromium sulphate seems to be of benefit, in greater or less degree. Best results from its use apparently occur in cases of prostatic hypertrophy, exophthalmic goiter and neurasthenia. Theoretically, assuming that this remedy has some specific action upon fibrosis, it should be valuable in interstitial nephritis. Who will try and report? As yet we know little about the drug or how it acts, but the really remarkable results frequently following its use encourage to further trials. It seems to us that the doctor's dosage was excessive in case 1.—ED.]

CLINICAL EXPERIENCE WITH CALCIUM SULPHIDE

No man is so much at home as when among his kind. What I have to say I wish to impart in the simplest form, shorn of technical phrases, to save time and space; for, after all, those who love us most are the patients successfully treated, showing that



S. B. BANKS
Meharry Medical College, Nashville



A. S. MAGEE
Louisville National Medical College

results are the only real stepping stones to advancement.

I write of calcium sulphide, because I have learned to depend upon it as a remedy which gives results when properly used in the right kind of cases. Don't expect it to cure everything. It certainly will not do that.

Everybody knows what calcium sulphide is. However, not everyone knows why he fails to get results when using the drug unless he has been long in practice. Even then we older fellows get "stung." After we are sure a given drug used is not a prime article, it is often difficult, many times even impossible, to obtain a supply of proper quality.

I had tried calcium sulphide periodically during two or more years before discovering three important things, namely: (1) The drug I used was not all it should be. (2) I prescribed it in too small dosage in deep-seated asthenic cases, and in too large doses in sthenic cases. (3) A few common symptoms could be relied upon in all cases, regardless of the disease so named.

After I discovered and corrected these errors, classifying my pathologic conditions objectively and symptomatically, I found

calcium sulphide, when of reliable quality, to be one of the most useful drugs in the whole materia medica, for abnormal lesions. In this paper I will try to give an outline of what I actually do in daily practice, describing a few of the different classes of cases in which I am prescribing this agent, feeling sure that those who thus far have not used it extensively will feel more inclined to do so. Then, if they will bear in mind the things I say, together with the indications I find favorable to its administration, forgetting the name of the diseases mentioned in this connection but solely relying upon their own judgment and ability to improve upon what I have tried to do, they surely also will be admirers of calcium sulphide (alkaloidal) and enlarge its field of application, to their own satisfaction and great benefit of their suffering patients.

Calcium sulphide usually is indicated in the case of skin eruptions due to the absorption of toxins from putrefying food retained in the alimentary tract. You may feel certain in regard to these manifestations; they are always present in disease although in acute cases, especially in sthenic ones, time has not elapsed sufficient to involve the

glandular and lymphatic systems. In such cases I am guided by the temperature if this indicates the presence of pus. In lues I use calcium sulphide extensively together with minute doses of protoiodide of mercury, or with an active vegetable compound (such as equal parts of kalmia, phytolacca, corydalis and pulsatilla) if the case has been too long upon mercurials.

There is no stage in which calcium sulphide is not indicated, certainly not in acneic or other cutaneous conditions.

It is also indicated in all septicemias, tuberculous abscesses or sinuses, with purulent secretions, in phthisis, deep-seated tonsillar abscesses, follicular tonsillitis, and caruncles. In all such conditions it is well to increase the dose rapidly to nausea, then go back to small doses, gradually increased to the point of tolerance.

At present I am using this drug in a case of degenerative uterine fibroids; in one case of phthisis, and one of lues in the tertiary stage, and I find it one of the most satisfactory and useful agents I have ever used.

Similarly I have been treating three cases of tonsillitis, two of which are chronics who report having "quinsy" twice a year regularly, the third being one of follicular tonsillitis. The two chronic cases had every evidence of a deep-seated abscess forming and the patients assured me they "would have to have it lanced when the time came if it did not break before, as that was what it always did." In each case the tonsil was greatly swollen, purple, but there was no sign of pus on the pharyngeal surface; there was throbbing pain, and the cervical glands were noticeably swollen. I gave aconite, gelsemium and veratrum to aid the circulation and allay the nervous anxiety, and six 1-2 grain pills of calcium sulphide every three hours for four or six doses, then three or four times a day. I assured them I expected to abort the attack and I did. The patient attacked with follicular tonsillitis was confined to her bed, but in two days was back in her office. These are only a few of the latest experiences. All three were quite ill at the time I was called.

In two cases, where I am sure of the diagnosis being one of lues, I have had a very singularly gratifying experience. The first one evidently had "mixed infection," and in about four weeks was one complete mass of rose-colored papulosa with characteristic throat complication. There was iroconjunctivitis, and that headache so persistent yet hard to describe—"a maddening pressure." The one other strong feature was an intracostal neuralgia in the left side at about the sixth intercostal space that was difficult to relieve. I placed the patient on mercurous iodide and colchicum, alternating until I found the point of tolerance, then gave less protoiodide and more colchicum. For the acute symptoms I gave aconite, gelsemium, bryonia and rhus tox. This treatment was kept up three or four weeks, when all symptoms were gone except a cervical catarrh. After that was cured the patient continued well, apparently, and stoutly refused to take another dose of any medicine, especially those "rotten pills."

About ten or twelve months later a round open ulcer appeared on the calf of one of his legs which refused to heal. After much persuasion I succeeded in getting her to take treatment for about two weeks; then the patient again refused upon the grounds that she "felt fine." Two months later throat and eye symptoms reappeared. This time the patient accepted a course of the vegetable compound, and of course, I gave calcium sulphide—"those rotten pills." After a two-months' course I allowed a year's rest. At present the woman appears perfectly healthy. This person should have two or three months of treatment every year for three or four years, and I believe a cure would be perfected. The following case is especially important:

Woman, primipara, 38 years old. Two years ago, upon her marriage, primary infection occurred. I did not treat her then, but have a full report and knew about it. One year later the woman became pregnant. Being consulted about the sixth week, I advised abortion, telling why. This was refused, still my services were earnestly solicited. After fully acquainting

them with the fact that the only hope for a healthy child was in a full and constant course of treatment, this applying also to the child, should it live. Accepting the case, I gave the vegetable compound, named above, during the first month, then in conjunction with calcium sulphide. At full term the woman was delivered of as fine a girl baby as I ever saw, perfect in every way. I advised artificial feeding. Here again I met an insuperable obstacle, so continued the medical course for the mother. It is nearly a year now and the baby is as well as any child. One feature during the whole course that worried me at all was an occasional and severe inflammation of one labial gland, which at various periods threatened to suppurate.

Out of some twenty cases I selected the two here reported because they were so easily treated. But I had cases where the patient's whole eyebrows and hair came out, teeth got loose, finger-nails stopped growing, loss of eye (due, as we all know, to plastic iritis adhesions), and some had been through the mercury-course until it was a question which was the most at fault, the treatment or the disease—and in each instance, as soon as I could relieve the acute symptoms, I put them upon what you may call my calcium-sulphide course. This remedy does not injure the system, is acceptable to all, gets results, and, properly administered in conjunction with alteratives as here suggested, is, I believe, the best course for all such classes of cases.

In closing I wish to impress the imperative need of a *constant watchfulness* over the bowels, skin and kidney. I prescribe a systematic course of baths, and keep the bowels normal, and *refuse to treat* any patient that will not obey my instructions regarding these matters.

F. E. HUFNAIL.

Minneapolis, Minn.

quality. Of course one cannot get effects from calcium *sulphate*; the real *sulphide* can be depended upon to make good in proper cases.—ED.]

ON STRYCHNINE IN PULMONARY CONGESTION OF THE AGED

Goyard relates the history of an old man, whom the shroud had already enveloped, literally snatched from death by strychnine, which a providential chance (in the shape of a dosimetric physician) had come to put in the hands of his nondosimetric adviser. The princes of the science say that to a powerful organism fighting despairingly against an evil the official art can bring no succor. Is it an aid, then, this morphine, which acts essentially by preventing the respiration and the heart exhausting themselves too quickly and resting paralyzed under the pressure of the sanguine congestion? Morphine subcutaneously constitutes, in respiratory maladies, especially asthma, a puissant eupneic, but one that must be managed with extreme prudence, as Mora has well said.

This medication should only be employed at the debut, and should be absolutely proscribed when the malady has entered the anatomic period, for then the remedy is worse than the disease. Everybody knows that opiates congest the cerebral and nervous centers, provoke dyspepsia, extinguish bronchial sensibility, and favor the accumulation of the exudates and of carbon dioxide, determining a fatal mechanical asphyxia. Hence we derive one leading indication for the alkaloidal vital incitants, which maintain the electric circulation of the nerves.

Nobody familiar with the active principles can read of an old man ill with pulmonary disease but that *strychnine* comes to mind. How many cases have been recorded where this remedy, alone or as dominant, has at the supreme moment come in time to prevent the work of death.

1. Bourdon tells of a woman, aged 76, anemic and debilitated, attacked with a left pulmonary congestion verging on pneumonia, with considerable oppression, moderate fever and irregular heart action, sputa

[This article is a remarkable tribute to calcium sulphide. It is a remedy in which we have great faith, one that we think is not appreciated as it should be, largely because much of the drug usually sold is of inferior



Graduating class of the Bennett Medical College. Please notice that some of us at "alkaloidal headquarters" have "budded into" several of these class pictures.

viscous and blood-streaked, who was cured in a few days by expectorants associated with digitalin, but notably strychnine, which latter in truth recalled her to life. The following year she was buried as the result of similar conditions combated by the classic treatment.

2. A woman, aged 40, in the asphyxial period of pneumonia, treated by defervescents and alcohol, was kept alive from day to day by the intervention of strychnine, which induced a veritable resurrection.

3. A woman, aged 43, with a very grave pneumonia, for which she had been given up, was saved by strychnine given progressively and even passing a little the doses thought to be the limit.

4. A patient, aged 20, at the asphyxial period of a pneumonia which, from the base, had extended to the apex, was rapidly carried out of the danger by strychnine, dry-cupping, etc.

In all these cases strychnine played the leading role, and showed itself the true "war-horse" of the physician. To quote further examples would be useless repetition. The records of active-principle medication are crowded with similar cases.

As Goyard says, the employment of strychnine in the pulmonary congestion of

old men, with or without cardiac complications, is a classic fact, a means sure and without danger, a heroic resource. He adds: "How long will the powerful weapons of dosimetry be confined to the hands of these adepts alone, these men whose one thought is to cure?"

Germain Sée demonstrated the famous expectant treatment, imported from Austria at the Pitié hospital, and those who followed his clinic, as Bourdon caustically remarks, were not impressed by the results. One looks to the zymase, another to the microbe; each wars against his enemy, agreeing in reliance upon expectation, nutrition, alcohol and antipyretics. Sée speaks learnedly of "defending the besieged city," and, unable to destroy the assailant directly, of furnishing to the besieged such munition as will enable him to prolong his defense and tire out the enemy.

Trousseau said wisely, "It is not medications that cure, but the manner of giving them."

The action of antipyretics is not the same when given alone as when administered in conjunction with strychnine, the latter enhancing their action in a remarkable degree. It seems that in some cases the nervous centers are too depressed to permit

the necessary reaction with these agents, until the stimulus of strychnine is added.

One must not forget that it is not a question of treating pneumonia, but of treating pneumonias and pneumonics.

With the aged the organic fibers lack elasticity, he does not react from a shock, but rests depressed. Instead of putting him to sleep with stupefants it is necessary to awaken him, sustain him, incite him, excite him, maintain him in time at any cost, for without this there is death. "In pneumonia, by the use of strychnine, the paralysis of the lung is lifted, the respiratory distress gives place to normal breathing; and even if the parasite is not completely destroyed or eliminated, the cardiovascular energy is at least fortified, the nervous forces are raised up again, so as to permit the organism to contend victoriously against the parasitic infection."

WILLIAM F. WAUGH.

Chicago, Ill.

FUTILITY OF QUARANTINE IN SMALLPOX

In the winter of 1880-81 we had, in our locality, an epidemic of smallpox. There were, at the start, twenty-eight cases, all healthy men. Of this number twenty-six died. This happening was accompanied and followed by a period of general vaccination, the good effects of which have been verified by two subsequent epidemics—one occurring some eight years ago, and one within the past eight months—in which there have been more than one hundred and eighty cases, and, to my own personal knowledge, not a single death. The last series of cases occurring here since last November numbered a little more than one hundred forty cases, and included persons of all ages, and in all conditions of life. The beneficent results of vaccination were everywhere apparent, whether direct or inherited. And here I want to insist upon the fact that a mother who has been made immune by vaccination may impart that blessing through her blood to her offspring; and it is for that reason we may find it im-

possible to get vaccination to take in such habits. For the same reason we find cases of varioloid in children who have never been vaccinated. This, also, I think, answers the question, why the disease is today different in its results from what it was formerly.

One fact is very evident, and it is this: vaccination, and not quarantine, is the remedy for smallpox, and the only one yet found that will control the disease. Germany has fully demonstrated this.

It is not alone among the poor and ignorant that objections to vaccination are heard. You will find them among the upper class who pride themselves on their culture, but which, in many cases, is only another name for selfishness; and it is among this class of people that the most trouble arises when we attempt to enforce an effective quarantine. The fool doctor whom such people often employ does not know a mild case of variola when he meets one, but, having a state certificate, his evidence in his efforts to hold his patron's good will by fighting the quarantine is one of the main causes of its failure. Among the poor and laboring class every neighborhood has an assorted lot of wise ones who "know" it is not smallpox. Two or three old grannies of leisure make daily visits for purposes of inspection and incidentally of distribution; and thus the trouble goes merrily on at the expense of the taxpayer and the business interests of the affected community.

Since last November there have been more than one hundred and forty cases of smallpox in the little city of Creston. The disease was brought to town by a woman who came from another part of the state and who, a few days after her arrival, was seized with headache, backache, and nausea. A doctor was called, who prescribed for grip, and did not make a second visit. Two days later another physician was called, who, viewing the few papulas that were then in bloom, told her she had chicken-pox, and that it didn't "amount to anything." He departed, leaving her much comforted. The family she was visiting consisted of nine adults, three of them young men, who promptly were taken down with the disease,

and, after the development of their pustules and subsidence of the fever, went back to their work in an institution employing some one hundred and fifty men and boys. The consequence was that the infection was scattered through every ward of the city before the board of health knew anything about it.

Of the one hundred and forty cases reported and kept under the supervision of the board of health a dozen were severe enough to be classed as dangerous; about twenty-five were severe discrete cases, but not dangerous; the other one hundred and three were mild cases of varioloid, among which were some five or six cases that had the prodromal aches, pains, and nausea, with fever and macular spots but no eruption, the macular spots fading away a few days after the subsidence of the fever.

In the supervision of and caring for many of these cases, I think I have learned some important things in regard to the treatment of this disease, and which I wish to set forth here.

In the beginning, clean out the patient with some unirritating laxative. Follow this with mild antiseptics and give concentrated, nourishing diet; cooling drinks, such as lemonade especially in children; and, from the beginning of the eruption until the scabs fall off, keep them well anointed with carbolated vaseline. Let the papules and the pustules severely alone, unless you want some permanent scars to remember the occasion by. In the severe cases, where confluence is threatened, spread on the carbolated vaseline thickly. Internally give a grain of calcium sulphide every three hours for two days, then every six hours until the trouble subsides. See to it that the patient has fresh air, and lots of it.

WILL D. CHRISTY.

Creston, Ia.

[The above is an abstract from a paper read by Dr. Christy before the Iowa Association of Health Officers, October, 1908. The doctor feels strongly about the supreme value of vaccination, and just as strongly against quarantining, and properly so.

The disadvantages of the latter have been amply demonstrated, because it cannot be efficiently carried out, as is pointed out by Dr. Christy.—ED.]

HOW CALCIUM SULPHIDE ACTS

Dr. Ussher, in his notable article on calcium sulphide, credits the efficiency of the drug to the liberation of sulphureted hydrogen in the blood and its action as a germicide there. In my unaggressive opinion, if sulphureted hydrogen were not eliminated by the skin, or otherwise, the patient's span of life would be brief.

Back in the dim past the parasitocidal value of sulphur was known. Many years ago the bactericidal worth of sulphur, its compounds and conjugates, was appreciated. Nearly a half century ago Polli, the Italian, extolled the merits of the hyposulphites and sulphites in pyemia, glanders, typhoid fever, etc. The subject to which I beg your attention and consideration is this: How and why does calcium sulphide act as a blood disinfectant and germicide, and as a preventer and absorber of pus formations?

My theory, put forward with modesty, is that the sulphide is split and disorganized by the gastric juice. Calcium chloride is formed, sulphureted hydrogen is given off, sulphurous acid, alone or in combination, is formed and absorbed into the blood, and this, together with the calcium chloride, is the immediate active agent in producing the beneficent effect.

I don't know why I am writing all this (it sounds dreadfully egotistic) save that you have shown interest in my scribblings and were kind enough to send me Dr. Ussher's article for perusal. My bent of mind is critical, and though acknowledging the great merit of the doctor's article, I could not pass his theory of the action of sulphureted hydrogen without a word of protest.

J. L. de WOLFE.

West Paspebiac, Que.

[Dr. de Wolfe's article is part of a very interesting correspondence, occasioned by the perusal of some of the doctor's contributions

to other journals. It is an interesting contribution to the theories concerning the action of calcium sulphide, and we hope will excite comment and discussion. This is an exceedingly valuable remedy, and we should know all possible about it.

If calcium sulphide is taken during the period of acid digestion it is decomposed and unpleasant eructations of hydrogen sulphide are given off; but if not taken during this period it seems to be absorbed without change, whatever modifications it undergoes being effected in the blood. Hydrogen-sulphide gas is known to be deleterious when inhaled, but I have given calcium sulphide up to 50 grains a day without observing any indication of alteration of the blood, or any unpleasant or alarming symptoms. Hence my belief that it acts in the form in which it is administered, and that it is harmless.—Ed.]

PELLAGRA IN ARIZONA

While I have practised medicine for more than thirty years, yet never reported a case to a medical journal (which I admit is not to my credit, for I have seen some exceedingly interesting ones), I may not develop a fluent style at this late date. However, the following is of such interest to the profession that I cannot refrain from reporting it.

Some two months ago a Mexican girl, aged 17, came to my office with some brown patches on the forehead for which she desired treatment. I could not diagnose the trouble, so treated her symptomatically. As the patches resembled secondary luetic lesions more than anything else, I put the girl on appropriate treatment. For a time she seemed to improve, and discontinued her visits. Later on, however, she was confined to her bed, when I was called to see her.

I found the following symptoms: Purpuric patches over the face, fore-arms, hands and body; extreme depression; excessive salivation; a fiery-red tongue; ulceration of the buccal surfaces, nose, alimentary tract, and vagina; obstinate diarrhea; marked

desquamation of the skin, the line of demarcation at the wrists being very plain and significant; skin over the dorsal surface of the hands wrinkled; temperature fluctuating between normal and 102° F., and the pulse ranging from normal to 120 beats per minute.

I frankly told the father that I did not know what the disease was, and so he at once called in consultation Dr. John E. Bacon of Tomboline. After a careful examination the latter pronounced it a case either of general tuberculosis or pellagra. He took home a sample of the sputum for examination, which proved negative as to tuberculosis. Dr. Bacon then said he was confident it was a case of pellagra.

Before learning the result of the examination of the sputum, I studied the case daily, and finally concluded that it more probably was a case of scorbutus or scurvy than anything else. Knowing nothing of pellagra, I was astonished later to discover that both the medical dictionary and the only journal at my command containing anything bearing on this case gave "scurvy of the Alps" (*scorbutus alpinus*) as a synonym for pellagra.

The etiology of this case is obscure. The family is of the well-to-do Mexican class, and deny that at any time they have been given to the use of Indian corn. Drs. Platt, Stratton and Warner of Safford also saw the patient, but could make no diagnosis.

I am confident it was a genuine case of pellagra, as the symptoms corresponded in every respect to those given in the Illinois Board of Health Report. The case terminated fatally within three weeks, with no amelioration of symptoms, except that there was a lessening of the intense salivation. The attack was of a much longer duration than just the time that the patient was confined to bed.

JOHN H. LACY.

Solomonville, Ariz.

[This is interesting. Cases of pellagra are cropping out in all sorts of unexpected places. Sorry the doctor secured no photo-



Senior Class of the Ohio-Miami Medical College, University of Cincinnati

graphs as these help greatly in verifying the diagnosis.—ED.]

NUCLEIN IN MALARIA

I was in the Philippines when the active principles first came to my notice. So I sent to Seattle for some of them to try. Among the remedies I selected for trial was nuclein. The little I had read about it had impressed me as eminently reasonable, and I ordered a supply of it.

A day or two after receiving these drugs, I was attacked with what I thought was malignant tertian malaria, which was very prevalent in that locality at that time. Now I have never failed to cure this form of malaria with one or, at most, two big doses of quinine on the off-day. So I proceeded to "clean out," and took 40 grains of quinine on the off-day.

To my surprise, the next day my temperature went to 103°F. whereas it was only 101° F. the first time.

I repeated the treatment, being careful to take the quinine on an empty stomach, with plenty of water, and at the most favorable interval before the expected attack. The next day my temperature went to 105°F., and I was delirious.

At this point the case became interesting. It resembled malaria in being frankly intermittent, the febrile stage lasting only about six hours. On the other hand, it differed from malaria in being unaffected by quinine; in an increase of temperature of two degrees with every successive febrile attack; in considerable prostration, with heart wavering, during the intermissions. I took acetanilid for the excruciating headache. (I have since learned to control these headaches with small doses of atropine, which beats the coal-tar antipyretics all hollow); but as I limited myself to a single 5-grain dose of antikamnia during defervescence, and as I never developed any idiosyncrasy for acetanilid before, I do not think this could have affected the heart.

How I wished for a microscope. But there was neither a microscope nor a railroad, nor even a good wagonroad within one hundred miles of me. The question what the next attack would do to me also had its interest, though of a personal rather than a scientific nature.

In this crisis, I turned to the nuclein I had just received as a drowning man to the proverbial straw. My hypodermic had been ailing for some time, and now relapsed into innocuous desuetude. So I took grt. 20 per os every two hours on the off-day. I had no other treatment whatever after the subsidence of the last febrile attack.

The next day I awaited events with interest, but nothing happened. There was no rise of temperature. (It took several months to get over the heart trouble.)

I have had a good deal of use for nuclein since then, but have never noticed that euphoria after taking it, either in myself or any other patient, except from one bottle, which arrived with a loose stopper. This had a vinous odor, taste—and effect.

C. F. M.

—, Washington.

THE USES OF MISTLETOE

Viscum flavescens, the parasitical growth on trees commonly known as American mistletoe, is found in abundance in this region. (The European variety is the *viscum album*.) I make a tincture from the entire plant by filling a wide-mouthed bottle with the stems and leaves and then covering them with full-strength alcohol; however, if recently dried, I dilute it with one-third the amount of water. This I let stand about fifteen days, then express in a tincture-press and filter the resulting amber-colored fluid. This tincture I administer in half- to one-teaspoonful doses, repeating often enough to get effects every ten, twenty, thirty minutes in urgent cases, in others every one, two, three or four hours, as needed.

I have employed this preparation for now ten years, have watched its physiologic action carefully, and have come to the conclusion that it is far superior to ergot in many of the

diseases where the latter is commonly used. Ergot contracts the circular fibers of the uterus, thus preventing that organ from dilating and emptying, while mistletoe exerts its influence on the longitudinal fibers, forces down the fundus of the organ and so facilitates labor by aiding in the expulsion of the fetus and placenta. We can give viscum without misgivings as to any possible bad effects, while ergot is almost sure to do harm.

Furthermore, viscum is a better remedy in purpura hemorrhagica than either ergot or hamamelis. It also acts well in any bowel trouble where there are copious watery discharges by constricting the mucous coats of the intestine.

Mistletoe is a splendid hemostatic in hemorrhages of the lungs or bowels. I have also obtained fine results from it, in half-dram doses given every two hours, in spastic action of the bladder in acute cystitis, and a few times in chronic cases, but failed to get the direct indication for the latter trouble.

W. H. YOUNG.

Booneville, Ark.

[Mistletoe has been repeatedly recommended in labor, in place of ergot, because it incites intermittent uterine contractions. Dr. Ellingwood declares that it is safer than ergot. Its use during labor has been earnestly advocated by Dr. W. H. Long, of the U. S. Marine-Hospital Service, upon the ground of its rapidity of action, in addition to the ability to excite intermittent contraction. Shoemaker says: "In epilepsy, chorea, asthma, and many other nervous affections mistletoe deserves further trial. In weak heart, with insufficient contractile force, it has some value; in uterine hemorrhage it has been found useful. It has likewise been employed in dropsy and amenorrhea, and is of service in menorrhagia."—ED.]

POTASSIUM PERMANGANATE

One of the most convenient remedies for use in measles, scarlatina and similar troubles is potassium permanganate. It

can be carried in a small vial and a solution can be quickly and easily made for sponging the body. Its beautiful color impresses. Whenever hot or cold compresses are to be used, rather than tell the patient to use plain water, whip out your vial of this remedy, dispense a little of it, with instructions as to the strength of solution; usually when it is of a cherry-red color will be strong enough. Squire's "Companion to the British Pharmacopeia" speaks very highly of this remedy and mentions it as being of use in diabetes. The latter trouble is rapidly on the increase in this city, no doubt due to undue mental and nervous strain, plus irregular methods of living.

F. MARSH SOPER.

New York City.

ARGYROL

With the above agent I have saved the eyes of many infants. I have cured many cases of urethral gonorrhea. I have arrested many septic infections. You must use it in not less than 25-percent solution. I often use 40 percent. It is absolutely non-irritating. It is non-toxic. It does the work—and that's the thing.

S. L. E.

—, Florida.

THE CLINIC A REFERENCE LIBRARY

Your kind letter, so pleasantly reminding me of my duty as one of your faithful subscribers, came to hand just a few moments ago. For fear that I may again neglect sending your two dollars, I hasten to comply with your earnest request and enclose the same herewith. May it come to your desk accompanied by many, yes, thousands of equally pleased and delighted doctors' remittances.

I have not long been a subscriber to the "CLINIC" (which seems to me to have been a most excellent name for Dr. Abbott's most helpful monthly), but I have all the numbers from the first issue bound and placed in prominent position for almost daily reference in my library. Why, boys, you could not

buy my yearly "books" at any price if it were impossible for me to replace them. They have proved to be invaluable to me in many a trying case. Hardly a day goes by that I do not refer to them.

May you all live long, and while you continue to live do not fail to continue giving us the very best of everything in our line.

BURTON R. MILLER.

Tiffin, O.

[Thank you, Doctor, We certainly shall try, and while our friends continue with the "boost" which has made *our* journal what it is, we feel that its continued success is assured.—ED.]

THE CULLOM BILL—ALKALOIDAL PRACTICE

April CLINICAL MEDICINE in hand and its pages read with ever-increasing interest and enthusiasm.

I have just written our Senator Warner, *in re* Sec. IV, Cullom Bill. I am an experienced druggist, now a dispensing doctor, and I shall stop practising medicine if forced to quit dispensing. I do a lot of prescription writing, but I believe it is my privilege to dispense every dose of medicine I give, if I prefer to do so.

My druggists (and they are good men) do not ask me if they can counter-prescribe, but do it in my presence every day.

I use the alkaloidal remedies and get good results. Frequently lose the patient too soon—gets well too quickly. I use all of the following and they never fail where they are indicated, and used right. Have also induced a number of my friends in the profession to use them: Aconitine, aesculin, apomorphine, arbutin, aspidospermine (a dandy), atropine, bilein, cactin (a dandy), calcidin ("king"), calcium sulphide, cicutine (great), cocaine, colchicine, codeine, copper arsenite, digitalin, gelseminine, glonoin, hyoscine, macrotin, nuclein (fine), phytolaccin, quassin, strychnine, veratrine and a number of combinations.

General Abbott, I appreciate your fight and heartily endorse it all. I am at one of

the guns. You can depend upon me. Give your command.

M. E. BRADLEY.

St. Louis, Mo.

[Missouri has to be "shown"—but only once. Since we told the story of the Cullom bill last month we have received letters from many medical men in all parts of the United States, all protesting (except one) against this further interference with the rights of the physician. Many medical societies have already taken action, forwarding their resolutions to their senators and congressmen. Missouri leads. We have received communications from six or more secretaries of its county societies, telling of such action. We opine that the Missouri senators are fully advised by this time of the sentiment of the medical profession of that state. Other states have done and are doing nearly as well. Read the resolutions passed by a Colorado society, which follow.

Dr. Bradley expresses the sentiments of the majority of physicians. We have no desire to oppress the druggist, or to make his already hard condition less satisfactory. But attempts to legislate money into his pockets are not to be endured. Let every physician look alive, and be active. Look up again the first "Miscellaneous" article of last month, and act at once.—ED.]

RESOLUTIONS ON THE CULLOM BILL

Many medical societies have already taken action concerning the Cullom bill, which, while intended to limit the traffic in habit-forming drugs, a most desirable thing by the way, would, if passed as drafted, interfere seriously with the rights of physicians, especially those who dispense their own remedies. We print below the resolutions passed by the Larimer (Colorado) Medical Society:

THE LARIMER COUNTY MEDICAL SOCIETY at its regular meeting on April 6th, 1910, after a careful consideration and discussion of the Cullom Bill unanimously adopted the following resolutions, viz.:

WHEREAS, A BILL, entitled, "A Bill to Regulate the Manufacture and Sale of Habit-Forming Drugs" has been recently introduced into the

United States Senate by the Hon. Shelby M. Cullom of Illinois, and,

WHEREAS, As said bill discriminates against physicians and if enacted into law and enforced would greatly hamper them, especially those in remote rural districts, in their work of relieving suffering, and in many cases endanger the comfort and lives of their patients, therefore be it

RESOLVED by the Larimer County Medical Society, in regular meeting assembled, that we hereby protest against the passage of this bill in its present form and request the Author of the Bill and the Members of the United States Senate to amend it so that the final clause of section 4 will read as follows, viz.: "But nothing contained in this section shall apply to licensed practitioners actively engaged in medical practice, to veterinarians, to public hospitals or to scientific or public institutions," and be it further

RESOLVED, That copies of these resolutions be sent to our United States Senators and Members in Congress and that they be requested to use every honorable means to have the bill amended as above indicated.

E. STUVER,
Secretary.

It is to be hoped that many other societies will take similar action, and physicians should, individually as well as collectively, demand that this bill be so modified that the rights of physicians may not be interfered with.

THERMAL MEDICATION WITH HYPERTHERMINE (L'AMBRINE)

Dr. Barthe de Sandfort of Paris has published (in *La Revue de Pathologie Comparée*, Jan., 1908) a paper on hyperthermal medication. He obtains his means of applying high degrees of heat from a mixture of various kinds of water and resins (keroresin) to which he has given the name of "hyperthermine." This mixture, which is solid in its cold state, becomes fluid when subjected to heat, either direct or in a water-bath, and it can be applied like an epithem or by spraying it like water on the parts.

Hyperthermine is characterized by three distinct properties: (1) It is tolerated without causing changes, at temperatures varying between 180° and 220°F., according to whether it is applied to the corium or not. (2) It keeps up the temperature of the application at a much higher degree and for an infinitely longer time than anything observed before. (3) It contracts in cooling; and it is this property, by far the most in-

teresting, which gives it a unique place, and really constitutes the originality of the method.

By the application of hyperthermine we obtain the action of great heat combined with the advantages of a slow, gentle, uniformly progressive compression, the mechanical importance of which in articular, glandular, testicular, and especially phlebotic and varicose engorgement is evident. Thus hyperthermine is a physico-mechanical means to obtain automatically (by elevated temperature) complete asepsis, cleansing and regularity of scars, without any intervention on the part of the operator.

Hyperthermine will give valuable aid to the physician, the surgeon and the veterinarian. In fact the field is so large that we can perfectly understand the suspicion with which it is sometimes received. If, however, it is looked upon not as a medicament, as it does not contain any medicinal substance whatever, but as a vehicle of heat and as a mechanical means of compression and disinfection, it represents a purely physical agent, and as such its use should not be confined to narrow limits. Heat has always been applied by physicians, surgeons and veterinarians. Hyperthermine offers a new method of localizing intense and painless heat in an affected region, and it does not affect its value that this agent can be used for a variety of purposes, so long as it is practically useful and applicable in all possible conditions.

It may be mentioned that hyperthermine has been known in France, for the past ten years, as *l'ambrine*, and the original French literature refers to the product under the latter name. As hyperthermine has a definite meaning, the remedial agent will be known in this country only as hyperthermine. It is manufactured in France, and the Thermo-Chemicals Company, 6 Cliff Street,

New York, is the exclusive selling agent for the United States, Canada and Mexico.

"STILL RUNNING THE RACE"

I feel I ought to write you; in fact, I've got to—can't hold in any longer. I have been a reader of *THE CLINIC* since 1899, and have never in all that time said boo—or anything else—about the splendid bills of



Dr. Field's Home and the Doctor Himself

fare I have waded through regularly; but I've done an awful pile of thinking, and don't you forget it.

I came down here three years ago from Chicago—wanted more room, you know—more air space—more real hard work; you can always find that in the country, and you can see from the enclosed photo just about what has happened during that time. Thanks to the alkaloids. They have done more for me than any other tool that I possess, and *CLINICAL MEDICINE* has "backed up" behind them. I feel pretty safe and worry less. Confound it, there's no excuse for me not writing you before, and there's no use for me to mention any either, for you know they're all in the dictionary. I just want to say, though—I have not forgotten the time when I used to lecture my class of juniors and seniors. How I would tell them now of the wonders of calcidin and saline laxative, glonoin, etc.

Well, Doctor, if you never hear from me again, you will know and can be fully assured: "I am still running the race."

ALBERT FIELD.

Stonington, Ill.

[Ah! This stirs my corpuscles! Here is a stimulus as exhilarating as wine, serving to keep our activities, for the doctor, at the very highest point.—ED.]

SOUR MILK VS. SAUERKRAUT

I have been interested in the ideas advanced by Metchnikoff as to the effect of sour milk on autointoxication from putrefaction of the contents of the large intestine; and it has occurred to me that it would be well to consider sauerkraut in this connection.

Cabbage rots easily enough under certain conditions, but, once the souring process is well established, it will keep a long time without spoiling. So here we have germs that are inimical to the putrefaction bacteria. I am not in a position to make investigation, but just offer this suggestion in the hope that someone will experiment and give us the result of his researches.

W. H. CHARLESWORTH.

Tennessee Ridge, Tenn.

[Here's an idea. Metchnikoff, however, advocated the use of the Bulgarian sour-milk, produced by a peculiar germ, more decided in its effects, more inimical to disease-germs than the ordinary lactic-acid organism.—ED.]

OUR JUNE NUMBER—TUBERCULOSIS

For the June number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE we have planned what is, rather incorrectly, called a *symposium* on tuberculosis (incorrectly, because the word, from *syn*, with; and *pino*, to drink or to "tank up," means a drinking bout in which songs are sung and a joyous time prevails). However, in accordance with usage we make use of the term. Our symposium on tuberculosis will

contain many valuable and important contributions on the etiology, pathology and treatment of the great white plague, which constitutes one of the most burning questions of the day. We have a promise, among others, from Dr. S. Adolphus Knopf of a paper on the "Prevention of Tuberculosis;" another paper, from Dr. A. S. Ashmead, on "Climatic Treatment," is already in our hands. Dr. E. P. Ward will write on the use of nuclein intravenously, Dr. George H. Candler on medicinal treatment, Dr. H. J. Achard on the specific treatment. Other interesting papers are promised.

But in accordance with our policy of asking the "family" to contribute largely from their wide experience, on the questions which we discuss, we want all our readers to chip in. Sit down today. It's *you* I mean, doctor, and you, and you. Look over the questions appended to this announcement, and tell us what you think concerning the problems, and what you know about them. If you have any interesting point to make on the disease, which is not included in the questions, write it up. Give us short, snappy little articles, full of vim and helpfulness. Do it right away, and let us have your papers by the tenth of the month. The preparation of CLINICAL MEDICINE takes lots of time, and we must go to press as early in the month as we can get the material. Now, get busy, and reply especially to the practical questions. The theoretical ones have only an academic value.

1. What is the danger of acquiring tuberculosis from the milk of tuberculous cattle, (a) for adults and (b) for children?

2. What is the influence of heredity in the causation of tuberculosis?

3. Of what practical importance is the laboratory diagnosis and control of consumptives for their treatment?

4. Consumptives are often said to be sexually inclined, more so than normal persons. What is your experience in this matter?

5. Consumptives are accused of being selfish, and mentally unstable. What is your experience in this respect?

6. The drug-treatment of tuberculosis you have found most useful: (a) tonic, (b) symptomatic, (c) antiseptic, (d) anti-toxic.

7. The dietetic management of tuberculous patients. Give your opinion regarding the value of feeding, overfeeding, the use of fats, especially codliver oil, etc.

8. What advice would you give a consumptive patient concerning the home-care of his disease?

9. What consumptives are to be sent from home for climatic treatment? What considerations enter into the question of selecting a climate?

10. What is the influence of altitude on consumption; what the influence of the marine climate?

11. What, if any, is the danger to the general health of health resorts from consumptives congregating in them?

12. What precautions do you order your consumptive patients to take in order to protect their families and associates from infection?

13. What precautions do you take to protect the children of consumptives from infection?

14. What is the physician's relation and his duty to the sociological aspect of the tuberculosis question?

15. Will you give an outline of the general prophylactic and hygienic regulations necessary to diminish the frequency of tuberculosis?

CLAY EATING EXTRAORDINARY

In the March number of *CLINICAL MEDICINE* I read with interest the article on the "Internal use of Powdered Kaolin," copied from the *Muenchener Medizinische Wochenschrift*.

It reminds me of an experience I once had in the case of two children, aged, respectively, four and six years.

Some workmen, while digging ditches to drain some bog land, came upon a layer of kaolin—sweet clay—covering a bed of hardpan. These children, seeing the workmen tasting the kaolin, and hearing them remark

upon its sweet taste, followed suit, and swallowed large quantities of it, the result of which was that their "inards," to use a vulgar expression, soon became as stiff as ram rods, and required prompt medical attention.

On my arrival at their home, and on being informed of their trouble, I must confess that for the nonce I was nonplussed as to the proper course of treatment to pursue. Recognizing the force of the adage that "delays are dangerous," I resorted to an immediate attack of the enemy in front and rear, and both ends of the line, with warm sweet-oil, with satisfactory results. They recovered, all right, but lost their taste for kaolin!

GEO. D. STANTON.

Stonington, Conn.

A PERIL TO THE SICK

A man falls grievously ill, his physician is called, the doctor writes a prescription for a drug or combination of drugs, which is sent to the drugstore to be compounded. Two-thirds of the drugs in use today in most drugstores are of no standard of strength, quality or purity. The federal drug law has no jurisdiction over them. It cannot punish the chemist who supplies the impure and inert article or provide for their inspection according to an unvarying and practical standard. Were it not better that such worthless drugs, prescribed to save life, should never be administered?

The *Pharmaceutical Era*, of Dec. 23, 1909, in an article by Mr. Henry A. Cary, contains an indictment of the Federal Pure Drugs Law, on which Representative Condreedy bases his bill, H. R. 13859, requiring that the United States Government shall edit and publish yearly the United States Pharmacopeia, and National Formulary, and have a complete test for purity and strength of all drugs and chemicals marketed as medicines. According to the present provision of the Statute no drug is subject to restrictions of any kind unless it bears a name recognized in the United States Pharmacopeia, a compilation prepared a

decade ago, and lacking the names, according to Mr. Cary's statement, of two-thirds of the drugs that are daily prescribed by physicians. Moreover it is within the discretion of the board of editors of the Pharmacopeia (not a government board) to withhold a standard from any drug now marketed or to change its standard without warning.

In the intervals of ten to fifteen years between two successive editions of the Pharmacopeia the science of making medicinal drugs may be revolutionized, yet may have no official recognition. One rule under the statute provides that a drug bearing a name in the United States Pharmacopeia or National Formulary and branded to show a different standard of strength, quality or purity shall not be regarded as adulterated if it conforms to its declared standard. That means that a doctor may write a prescription according to the standards of the Formulary and the druggist may fill the prescription from bottles that declare a different standard of strength, quality or purity. Mr. Cary is a responsible manufacturer, and as many of us know, the charges are by no means overdrawn, and they reveal a condition of the trade in medicinal drugs that is alarming, horrifying and essentially and despicably criminal.

If such conditions are allowed to continue, what has the editor and assistants who edit and revise the present Pharmacopeia to say in defence of this system, to put a premium upon the sale of impure, inert and worthless drugs? Is it any wonder that honest physicians, who desire only the best for their patients, are so skeptical in sending their prescriptions to the drugstore that a majority are now supplying their own drugs.

Far be it from me to accuse all druggists. I have many a friend in the drug business who I am sure would not supply an inferior drug or even substitute one for another, and if a doctor has such a man in his neighborhood, by all means he should be recommended and supported. But unfortunately there are many who are absolutely unreliable and for those of you who seek the best it is often necessary to supply your own drugs, not only for your patients' pro-

tection, but for your own, for if you give your patient an inferior or inert drug you will surely not secure the results you expect, and in that case your patient may think that you are not doing him or her any good, whereas the trouble is entirely due to the inert drug.

If you buy your drugs from a reliable manufacturer, one who stands by you and backs you up, changing goods if you find them not as represented, and doing all he can for the benefit of the medical profession, you may be assured you will get results that are lasting, and will (by the rapid cure and relief of your patients, due to reliable and pure drugs) make you known about town as "the man who gets results." As results mean increased business, so increased business means more money for the doctor, therefore, Brother Doctor, send to any reliable drug house and have yourself supplied with a list of every-day remedies that you may supply your own patients, and get better results, better success, better business and a better bank account.

Dr. George C. Dieckman, who by the way is a druggist, and secretary of the New York College of Pharmacy, said that there was more danger from the dispensing physicians giving inferior and inert drugs than there was from the druggist. He claimed that the dispensing physician treated the patients according to the drugs he had on hand, and did not treat the disease with the drugs required in the case, thereby reflecting upon the honesty and ability of the doctor.

In defense of the doctor, Mr. Henry A. Cary, has the following to say:

"Mr. Dieckman's statements about the danger from the dispensing physician seem to express disparagement of the medical profession, and he volunteers to tell the physician what he should do as a therapist. It seems to me that Dr. Dieckman, speaking as a pharmacist, is going dangerously out of the way to interfere with the physician's business. As a matter of fact, what he says is an evasion of the fundamental question, 'Shall there be one standard for all agents used as medicaments?' He therefore tries to deflect the public's thought from the single

and simple issue"—the sick man's right to pure, unadulterated, and reliable drugs.

Again, I say, that for the protection of the physician and his patient, it is absolutely necessary for him to have a reliable and honest druggist to put up his prescriptions with pure and reliable drugs, one who does not substitute, as many do, but always gives what is called for. If such a druggist is not available, it is up to the doctor to do his own dispensing, buying his drugs from a reliable drug house, especially a house that stands by the doctor in every issue that comes up, and fights his battles.

Mr. Cary quotes the following from the Bureau of Chemistry at Washington, a statement of Dr. Wiley: "Out of 1220 samples of imported drugs analyzed in the past year, 705 were below the standard, or in other words, represented violations of the law."

W. F. RADUE.

Union Hill, N. J.

ON CLEANING OUT

Someone has said that there is a funny side to everything for those who can see it. Maybe this is true. One thing I do know, and that is that I have learned many useful medical facts outside of the medical profession. My worries are lessened many times by what the poor widow woman with a large family of small children to support said to me: When things were good for her she was glad and when they were the reverse she was also glad that they were no worse. So you see she was glad, no matter how things went.

Many years ago I got an idea from a scrapper that has served me well many times since, professionally. He would rather fight than eat. He would leave the table any time to mix in with a fight, no matter what kind, whether gun-play, knife-, slash or fisticuff—it was all the same to him. And he always came out winner.

I asked him how it come that he was so successful and he said that the best time to begin a fight was in the beginning of it. "If I can get two or three bullets into the other fellow," he said, "before he realizes

that the fight has commenced; I have much the advantage of him after this in that fight. Here's the whole secret of my success—I land first!"

Why isn't that a good idea in our fight with disease. Get there first; "land," as it were; give a solar-plexus blow, and many times you have it down and out before it really gets much of a hold.

Assisting nature is all right, but it must be done "with a club," so to speak, many times, to obtain the best and quickest results. To illustrate what I mean I will explain how the get-there-with-a-big-stick worked with the big engineer who was taken violently sick with a very severe pain in his abdomen. Being a railroad man the company surgeon was called in. He gave his patient a hypodermic injection, pronounced the trouble acute appendicitis and made arrangements to move the man to the hospital the following morning for an operation.

During the evening, when the effect of the morphine was gone, the pain returned in all its severity. Being unable to get the company surgeon I was called in to give relief temporarily, as he said they were going to take him to the hospital the following morning to be operated on. I gave him the injection as he requested, but did not stop there. I also gave him about 30 grains of calomel, followed every two hours thereafter with one tablespoonful of saline laxative in one glass of warm water till bowels commenced to move. Called the following morning and found him upon the chamber. When asked if his bowels had moved, he replied that they had "done nothing else for the last two or three hours." He had filled the chamber about half a dozen times. The pain was gone.

They did not take him to the hospital and he was back on his job in three or four days, all right.

It may be all right to operate on such cases, but I hardly think so. Neither do I think it best to lose from twelve to twenty-four hours to "clean out" as would necessarily follow where 1-10 grain of calomel was given every hour for ten or twelve hours, then the saline. There's too much valuable time lost.

When I am called to see a patient and suspect that the alimentary canal, and the whole system for that matter, is loaded up with from one to four gallons of decomposing, microbe-forming sewage, I clean it out thoroughly and in short order by giving doses large enough to do this—20 grains to 30 grains of calomel at one dose, followed every two hours thereafter with a glass of warm saline solution till not only the bowels but the whole system is washed out.

When this is done more than half of the battle is won, and the patient's system is in a condition to assimilate such remedies as are necessary to finish up the case.

M. E. JOHNSON.

Pittsburg, Kan.

[You are eternally right, and your little paper might be regarded as a classic. Even your big dose of calomel was right in that case, though it is *very* rarely indicated. The only fault I find with your course is that you did not charge the man what he would have had to pay for an operation, adding 50 percent for saving him time and suffering, and avoiding danger.

Just to show that more than one road leads to success, I will add that Burggraave cured similar cases by pushing to full effect hyoscyamine and strychnine—the one to relax spasm of the circular intestinal fibers, the other to stimulate the longitudinal fibers and arouse peristalsis. Also, some success has followed enemas of kerosene to break up the impacted fecal masses.—ED.]

GRAVES' DISEASE—RESULTS

While many physicians have uniformly poor results with internal medication and decry anything but surgery as curative, yet in the dozen or more cases that I have treated with remedies the results have been so favorable that I contribute this in the hope that some one else will be encouraged to persist with his remedies and thereby relieve some poor suffering woman as well as to increase his faith in active potent remedies. The case reported is the most severe that it has been my privilege to treat.

While on a hunting trip in September, 1908, word was left at the place where I was stopping for me to call at a certain residence that evening when I returned to town. I found a lady of 42 with so clearly marked a case of exophthalmos that I could hardly see why any third-year student could miss the diagnosis; yet four good men had failed to diagnose it as such. She had all three cardinal symptoms in a marked degree; exophthalmos, tachycardia and enlarged gland. She could hardly walk across the floor on account of weakness and palpitation. I could not find any cactin in town and not having my case along, I used some cactina pellets until I could get home and send my remedies.

In all my other cases there has not been the extreme anemia and tachycardia present, and I have found lycopos to be sufficient. Now, there have been reports of failure with lycopos virg., mainly, I believe, because a reliable preparation has not been used. I have used other preparations, but have found that the mother tincture prepared by Boericke & Tafel, given in 5-drop doses four times a day, the only one that gave results. Try it, brethren.

Now back to my case; I put her on lycopos and cactin, gr. 1-67 every three hours, until the tachycardia was under control, and then I prescribed the arsenates of iron, quinine and strychnine, to be taken after meals.

There was immediate and constant improvement, and in February, 1909, she was discharged as cured, with all symptoms gone except some prominence of the eyes, which I think due to a previous severe attack during early married life, in which rupture of the cornea was feared. I wish to impress upon all readers the necessity of using dependable remedies. They cost a little more, but how you can smile when you get results. I, for one, cannot afford to take chances.

H. M. HOLVERSON.

Boise, Idaho.

[Right you are, Brother! We hope many of our readers will try your method of treatment and report results. Cactin we know is "A-1" for the functional heart dis-

turbance, and the lycopus (or lycopin) deserves trial.—ED.

HOW TO GET YOUR SHARE OF BUSINESS

The December JOURNAL OF CLINICAL MEDICINE (p. 1351) has an article on "How to Get Your Share of Business." As this question is an ever-present one, bobbing up in various guises and fraught with much practical interest to all of us, I ask the journal to allow me to say a few commonplace things which may help to form proper conclusions in the solution of this vexed problem. In order to treat of a subject, however, we must first understand that subject in its details and then clear away the rubbish of prejudice, of self-interest and conventionalism which are sometimes enthroned in the place of Love, Truth and Justice.

The first query that arises is, What is the medical profession; what is any profession or calling? The answer to this question is very relevant and material and upon it will depend whatever of suggestions for betterment we shall be able to offer.

Is the medical profession a unit, a whole in itself, or is it a part of a greater unit or whole which, when taken apart, injures if it does not destroy both? I think the question is in itself enough to show any fair mind that we are but a part of the great body politic, and in order to know our functions we must study the organization of that body and must abide in it as the branch abides in the vine. We can no more promote the growth and development of our profession at the expense of organized society than the branch can grow apart from the vine.

Flowing from these primal truths there follows first a common interest, linking together every trade, calling and business into one common brotherhood, making the interest of each the weal of all, so that as long as harmony prevails, good ensues, while the very first discordant note reverberates in rebellious lay.

Now let us consider, in the light of these premises, some of the ills we complain of.

What do the professions and trades owe to the great mass of humanity in which their destinies are cast? Answer: They should conserve their true and full interests in their respective lines. What, on the other hand, is due them? Full and ample support, measured by the interests of all concerned.

Remember, the highest authority, the court of last resort is the "genus homo." With his constitution of civilization man reigns supreme and every individual is a sovereign; hence to get his cooperation his sovereignty must be recognized. Many subdivisions into professions, trades, callings are formed for the better carrying on of the purposes and objects of this great compound unit, Society, but none are clothed with an authority commensurate with that of the parent body. Therefore, when one subdivision enacts rules and regulations, such laws can apply only to that division enacting them, and not to another or to the whole. Any question involving the sovereignty of another must be fixed by diplomacy.

If I have not misconstrued plain evidences, it is the violation of these evident truths that has led to trouble in the medical profession. We are the servants, not the masters of the people; nevertheless we have undertaken to rule beyond our authority. The result has been antagonism all-round. The self-complacent and authority-loving have erected barriers which drive the people from us, and in their wanderings they have met the patent-fake and the proprietary charlatan.

It seems to me that medical ethics ought to be a very commonsense arrangement, allowing such departures as are shown to be honorable.

The tendency to leave the poor to public charity is not only taking that much from us, but also much of the remainder which pays—we should do all the work and induce the public to help in it; by so doing we should regain lost prestige.

We should quit legislating about fees. The public will never cease to sit in judgment upon what they have to pay, and it is right they should. The doctor and the patient in a given case know better how much the latter is able to pay than any other mortal.

The doctor has the services with all that this means, and the other fellow has the money to pay for them. They want to exchange, and who will say that it doesn't take two to make a bargain.

Let me illustrate this principle in another way. This is an age of combination. Soulless corporations are reaching out to control every conceivable source of man's supplies. Suppose such a power should take hold of the medical profession for the avowed purpose of curtailing the number seeking to enter upon its duties and of selecting from this list certain medical practitioners who alone might be employed, would it avail the combination thus to close the ranks and to make use of its power to enforce its mandates upon an unwilling people?

Let the tokens of desintegration now apparent in most trust companies speak. I verily believe the doom of all soulless corporations is at hand, the potential arm of the people's power is raised to strike. Let us not at this late day incur its displeasure, rather let us seek that more enduring relation with our fellow man which takes him by the hand and in glorious fellowship leads him in the paths of peace while we grow in the confidence thus built up.

Medical societies are all right as other trade organizations are right. The field of their influence is wide for the elevation of the standard of membership, and in many ways for urging the members on to higher attainments. But no pressure or force exerted by societies will ever enable a profession to override the public will when this is founded on justice.

Therefore all organizations for the control of human action must recognize the right of appeal which limits them to the bounds of truth and justice. Professional ethics are wholesome and necessary, but if proscriptive and unjust, they give cause for appeal and reversal. By these principles, so imperfectly set forth, the true relations of the professions to the great master they serve are and will be restored; the autonomy maintained, every jarring discord eliminated, and merit rewarded. This is, at least, the truth as I see it.

As to the matter of which "Incog." writes, "How shall each obtain his share of business?" By the plan outlined above we hope to avoid all obstructing laws and customs, affording equal chance for each and every one to begin that individual effort which must henceforth determine the end. No two will end alike. No advertising, trickery or scheming can fill the place where only merit wins.

R. I. McQUIDDY.

Lawrenceburg, Ky.

[There is much truth in what Dr. McQuiddy says. When we read his letters or those of other friends who have rounded out their lives in doing good to their fellow men in our beautiful and grand calling, we feel like the Spartan youths of old, of whom history tells that they used to sit with the old men in the market place and listen to their wisdom. Times have changed, and the wisdom of the aged is not always deferred to as much as might be. Yet we are glad indeed to hear and learn from the "fathers" in the profession and are glad to listen to their experiences and counsel. The Doctor's words give food for thought, and they may well be remembered.—Ed.]

SUNLIGHT AND DISEASE

It is well known how large is the significance of light in the development of all organisms. The skin especially is subject to this influence. The exposed skin-surface is far more sensitive than the covered portion, and more so when it is diseased.

Experience has taught that cases of variola treated in semidarkness are much milder than when treated in full daylight. Where daylight is excluded and lamp or candle light substituted the formation of pimples and vesicles remains stationary, the skin never becomes inflamed and the pustules never suppurate. There never are heavy pains and even the itching is but very little. The earlier the room is darkened, the better the results. But even a short exposure to light might bring undesirable results in the stadium of eruption. Dr. Walters of London

describes, in *The Lancet*, a case of variola, where one of his patients felt so well on the fourth day that she wanted to read a newspaper. In order to make light, the curtains were drawn and sunlight was let in. After a few hours there was high fever and pain. The pox became confluent, and although finally cured, the face was disfigured by the pits.

One of my patients was confined in a room with terra-cotta-colored shades. She became restless, nervous, and suffered with conjunctivitis. She attributed these symptoms to the red color of the shades. I ordered blue-colored ones, and from the very moment these were used her nervousness was gone, sleep was normal, and the inflamed eyelids improved.

It is old news that blue color acts favorably upon the nervous system, but it has another advantage. Through an unpardonable error a window was left open without a screen. In less than no time the house was full of flies; some of the windows were just black with them. But they did not remain in the room with the blue shades. I was reminded of this when I read an article about the experience of Paul Fé, a farmer of St. Cyr, France, who had in his stables 170 cows. He observed that flies dislike intensely the blue color. He covered the walls of his stables with a sky-blue calcimine and the success was surprising—no flies remained in the place.

In one of the so-called sweatshops of Detroit were two large rooms, each occupied by about twenty "victims." In one room, which had red walls, there was continual quarreling, while in the other, a blue-papered room, peace ruled. I called the boss's attention to this difference in color, suggesting it as the probable cause of this peculiar condition. And true, as soon as he had the other room papered blue the quarrels stopped.

The insane asylum at Delft, Holland, is called *Blauwhuis*, i. e., Blue House. The interior decoration of this institution is mostly blue, and intentionally so. Cobalt-blue spectacles are sometimes sufficient to quiet nervousness. In our daily practice

there is room galore for a fair trial of this suggestion.

D. ZWIGTMAN.

Niles, Mich.

[This may appear strange, but come to think it over, I believe the doctor is right. Suppose the readers of *CLINICAL MEDICINE* try the suggestions and report.—ED.]

MEDICAL STUDENTS COME TO SEE US

As will be seen, we are printing in this number several groups of medical students, representing the graduating classes of several colleges. The seniors from several of the Chicago medical schools have been coming to see us. They find many things about our plant which are of peculiar interest to the young man just entering in life. We make it a point to show our visitors, first, just how an up-to-date magazine is produced in this day of automatic printing machinery, with its monotype and linotype composition, automatic feeding and "rapid-fire" presses, folding, gathering and stitching machinery, electrotpe work—everything in fact necessary in a thoroughly modern printing establishment.

Across the way from our printing plant is the great laboratory of The Abbott Alkaloidal Company, and that is of course of intense interest to the young men, who (having to give medicines when they get out into practice) should know something about how medicines are prepared and placed upon the market. Such a trip is a little therapeutic education in itself—or at least so the boys seem to regard it.

These visits all wind up with a "feed." Ah! That's the way to a healthy man's heart. And these boys, full as they are of red blood, enjoy this part of the entertainment, as well as the music, the inspiring talks by members of their faculties and others, and the stereopticon slides, which lend pictorial interest to every such occasion.

We also enjoy the visits. Would that we could have every young graduate in the country with us at this season. Can't some of you boys from outside of the city drop in anyhow?



CLINICAL · MEDICINE POST-GRADUATE SCHOOL *of* THERAPEUTICS

George F. Butler, M. D., Director
Thomas J. Mays, M. D.
Otto Juettner, M. D.

C. E. de M. Sajous, M. D.
William F. Waugh, A. M., M. D.
Alfred S. Burdick, A. B., M. D.

PART III.—LESSON EIGHT

BRONCHIAL ASTHMA

INTRODUCTION

The true bronchial asthma, sometimes designated spasmodic or nervous asthma, to distinguish it from cardiac or renal asthma, is what will be discussed in this lesson.

Etiology.—This is usually a reflex condition from nasal or nasopharyngeal disease, rhinitis, tonsillar hypertrophy or adenoids; occasionally resulting from pressure on the vagus by thyroid enlargement, tumors or enlarged bronchial glands, due to tuberculosis, measles, pertussis or rickets. It may also result from a toxic condition produced by lead, mercury, uremia or in connection with gout.

The affection occurs especially in weakly, anemic, nervous, scrofulous and rachitic subjects.

Sixty-six percent of the cases occur in males between the ages of twenty and forty years.

Sputum.—There is no sputum during the paroxysm, but at the end of the attack there usually is voided a small amount of tenacious sputum resembling egg-albumen. This contains many minute gray balls (*perles* of Laennec); when unrolled these are seen to be the spirals of Leyden, Ungar and Cursch-

mann. They are best seen with the naked eye.

Many yellow drops are also present. These are the Charcot-Leyden crystals. They are pointed octohedral crystals consisting of an organic base with phosphoric acid and are derived from the eosinophile leukocytes.

The sputum also contains many alveolar and epithelial cells, and most of the leukocytes are eosinophiles.

Blood.—During the paroxysm and for a very short time before and after, the blood contains an increased percentage of eosinophiles, averaging from 6 to 50 percent of all the leukocytes. This condition does not occur in asthma from other causes, but only in the true bronchial asthma.

THE TREATMENT OF BRONCHIAL ASTHMA

In giving the treatment of asthma I cannot do better than quote from James F. Goodhart, who says:

Asthma a Paroxysmal Neurosis.—
“It seems impossible to doubt that asthma is one of those nervous actions of which we see so many examples in our economy, and

which have been well called paroxysmal neuroses. Epilepsy is one of these; some forms of insanity are others; migraine is another; asthma is another, and so on. Now all these more or less obey this law, that the more they come the more they may. Nervous actions which in their essence and initiation are not abnormal, by excess of energy or of frequency, or of both, become abnormal; and ultimately is much of habit in the intractability of the disease; and if control is to be gained over either, it must be by catching it in the earlier days of its appearance, and by arresting it before it becomes confirmed. We sometimes think that we can gain some control over the convulsions of infancy; we can perhaps keep them at bay sometimes, and so stop the child from becoming epileptic. But what case is more hopeless than that of the confirmed epileptic, even though he be persistently stupefied with bromides?"

The case of asthma is a parallel one. It has been contended that it is a disease rather of childhood than of adult age; and that to pay attention to this fact, and to the suggestions that flow therefrom, offers the best possible chance of stopping the attack and of preventing the fixation of the habit and the establishment of chronic asthma. The chronic asthmatic is almost as hard to cope with as the chronic epileptic.

There are two Methods of dealing with the asthmatic. On the one hand, we may attempt to make the environment of the patient conform to the conditions required by the individual; or, on the other hand, to harden the individual, to widen his range of accommodation, and so to make him less susceptible. In the matter of drugs somewhat similar alternatives present themselves. We may either give sedatives to the oversensitive nerve-structures concerned, or give drugs, if such there be, to raise the level of nervous action to that higher platform that shall enable the perceptive centers to take less heed of their unnatural worries.

Palliatives take Precedence.—But the asthmatic paroxysm is so distressing that almost always the treatment of it usurps the first place; and too often this urgency of

the situation upsets the perspective. If we are called to a patient in the stress of a paroxysm of asthma, clearly, on all accounts, it must be arrested as quickly as may be; there is no time to be very careful and consistent about ways and means.

Thus the quickest way to relieve a paroxysm of asthma is to make the patient inhale some fume or other, as of saltpeter, nitrite of amyl or chloroform; or else to give him an injection of morphine or a dose of chloral. Indeed, as we all know very well, doctors see paroxysms of this kind less often because various patent powders for creating fumes held the field so largely that most people do without us and stick to their patent remedy.

Thus the treatment of asthma too often becomes the repeated sacrifice to the paroxysms; and the patient drags along, thankful for the small mercy of temporary freedom from its troubles, and easy in mind if he can carry in his pocket protection from those that are to come.

The Danger of Temporizing.—But this plan of campaign is ultimately a most disastrous one. It unquestionably produces temporary ease; but what happens afterward is this:

The vapor, on reaching the mucous membrane, stupefies or exhausts the nervous centers, and stops the spasm for a time. But at the same time some of these remedies, by stimulating the mucous membrane and provoking the flow of mucus, make the local erethism rather worse than it was before. The more sedative kinds of inhalations do but appease by offering bribes to vicious nervous influences. By and by the nervous centers wake up again to find matters no better, but rather the contrary. And then on comes the spasm again, and the whole process is repeated; and, with each repetition of the cycle, the nervous centers, as their nature is, become more exhausted or more irritable, their sleep is shorter, their spasm is more and more quickly repeated, and the poor patient ultimately lands himself, with perhaps some lessening of severity of each paroxysm, in a more prolonged or persistent stuffiness hardly less distressing

to bear. All day long he appeals to his powder, and in fact becomes the slave of an appetite that he has whetted and that he cannot now control. Thus ends the chronic asthmatic who betakes himself to vapors.

But this is not all, for by common consent a repeated application to some of these drugs, whether by making matters worse in the lungs or by worrying the cardiac ganglia, or what not, tends to dilation of the heart, and is equivalent to a good many nails in the coffin of the asthmatic. Moreover, this dread of the paroxysm itself is carried into the preventive treatment of the disease, and the patient is submitted to what may be called the "glass-case" treatment; that is to say, the temperament of the patient is ignored or not considered of importance, and the disease is supposed to be brought on by chill. If he be wealthy and adventurous, he fights his environment by running away; and thus he may, perhaps, get along pretty well.

Beware of the "Hot House" Treatment.—If the patient be a child, it is probably kept indoors, except in the finest of summer weather; yet, nevertheless, the history too often is that "it has caught another chill"—but no one can say how. At first, perhaps, the child had the whole house to roam about in, but as the "colds" recur, it is confined to one room with a south aspect; and yet things do not mend. So the doors of the room are carefully screened, the windows perhaps pasted up, and still the success not being all that is desired, extra clothing may be piled on. And ultimately the doctor finds hidden somewhere under this heap of precautions a pale, flabby, moist, steamy thing, with big eyes, thin cheeks, protruding ribs, and a more or less general bronchitis; a case of "successful" management, because no attack has occurred for some weeks! But is this to be called success? This is to nurse the powers into imbecility; and the inevitable result is, that the first time the patient puts his head outside the door a fresh cold is "caught," and a fresh term of imprisonment is ordered. I venture to say that if asthma is to

be prevented at all, it will never be kept at bay by such hot-house treatment as this.

Importance of Climate.—Unfortunately, it is easy to utter destructive criticisms of this sort but difficult to point to a better way. I think there can be no doubt that the first requirement for the asthmatic is to put him into a climate in which the sufferer can be much out in the air. But here is a difficulty; we know so little about climate; and asthma is so individual a disease. No one can foresee in a particular case whether this place or that will prove suitable; and, when the issue is doubtful, experiments in moving invalids about are never likely to be made with any great thoroughness.

Nevertheless, for most victims of asthma there generally can be found for each some particular localities where he feels more comfortable or even free from attacks. There he should be sent, at least for a time. This place may be at the sea, it may be inland; sometimes it is a dry place, sometimes a humid one; often even it is a large town. In many instances it is the air of cities that cures, and that kind seems to be best which is the most typical, namely, the most dense and smoke-filled. But wherever it be, the patient should be out and about with very little restriction; thus rendering the morbid circuit less prone to discharge. Of games and sports, all that are outdoor and healthful and invigorating should be encouraged.

The Dietetic Regimen.—In the matter of diet it is necessary to be careful, but not too much so. It is a very easy thing to prescribe numerous restrictions about food, and thus only make matters worse. Yet, an attack of asthma certainly often does seem to start from a meal that has not been digested—one which may have been too large, of an improper character, or taken at some irregular hour.

The points to aim at are good, plain, light food, in moderate quantity and slowly ingested. The asthmatic, particularly children, often are deprived of potatoes, starchy puddings, jam and sugar, and goodness knows what else, and on the other hand are put on various meat juices and other good

things in the wrong place, so as to remove all rocks of offense from the path of their pneumogastrics. But, "if these things are done in the green tree," what is to be done in the dry? What chance has such a child of reaching old age?

Any food that is plain and wholesome and known not to disagree may be allowed. It is a good plan to have the chief meal early in the day, when digestion is vigorous; therefore breakfast, lunch—an early dinner—should be the main meals; anything taken later must be small in quantity and of the most digestible kind. All meals for the asthmatic should be small ones. The stomach should never be distended.

The diet is frequently an important element in the successful treatment of these cases. Indiscreet and inappropriate diet often induces paroxysms, small meals of digestible foods being best. Many idiosyncrasies are met with respecting tolerance or intolerance of certain articles of diet. I have known fresh butter to be every time and immediately provocative of an attack. Hard meats, cheese, pastry, beer, and ill-cooked food generally are inadmissible. Full evening meals are to be avoided, and the chief meal is best taken early in the afternoon.

Furthermore, the bowels should be kept carefully regulated and sufficiently open by taking a saline laxative. Every effort should be made to put the patient in as healthy and physically fit a condition as possible. A tepid or cold bath should be taken in the early morning, and the living room be well ventilated.

These must be the general principles upon which to deal with the asthmatic; and this the more unhesitatingly the younger the patient, and just as soon in the course of the disease as he comes under treatment.

The Drug-Therapy of Asthma.—In considering the treatment by drugs, two divisions of the subject naturally present themselves, namely, those medicines that are useful in preventing asthma, and those that are so when the actual attack is threatening or in progress. Again, a distinction must be made between the cases that seem

to be pure nervous asthma, those in which there is any degree of persistent bronchial catarrh, and those already mentioned, which come on in later life and may not irrationally be attributed, on the one hand, to blood conditions that as a group may for convenience be called gouty, and, on the other, to the degenerative changes in the tissues.

Arsenic as a Preventive.—As a preventive remedy *in the pure form* of asthma, no drug, in my opinion, is equal or even nearly equal to arsenic. This remedy should be taken for three or four weeks, then omitted, and then resumed after an interval of equal length; and so on for three or four courses. After that the arsenic should, from time to time be resorted to in periods when from any cause the nervous centers begin to show signs of lowered tone.

Management of Bronchial Forms.—In cases where a persistent bronchial catarrh is at the bottom of the trouble, obviously less benefit is to be expected from medicines, in which case the suitable climate promises best. As a rule, such cases do best in dry and bracing air.

The two chief drugs from which much benefit often is derived are strychnine and iodine. The first of these, possibly, as a stimulant to the respiratory center, the other as an expectorant.

For the asthma that occurs in later life an eliminant treatment, on the whole, is the best. It is in such cases that a dose of calomel, perhaps with podophyllin, followed by a saline laxative, in conjunction with careful attention to and restriction of diet, are useful. In these cases, the iodine (as in iodized calcium), perhaps by its influence on blood pressure as well as upon the mucous membrane of the bronchial tract, often will help very considerably.

Asthmatics are much benefited by brine-baths and systematic exercises, such as the course elaborated at Nauheim for the treatment of certain forms of disease of the heart. One can well understand that means of this kind, by stimulating the circulation and facilitating the flow of blood through the lungs, may prove of much service.

To Relieve an Attack, or the semi-asthma that either forebodes and often lingers after an attack, other means must be used.

In the threatening of an attack, or in the dyspnea that lingers when the more acute symptoms have subsided, many drugs have been tried, and at one time or another succeeded. Of these I should put first calx iodata or potassium iodide, and lobelin. Sometimes a combination of potassium iodide and chloral hydrate has been effectual.

At the onset of an attack *grindelia robusta* is often of great value, given in half-hourly doses until relief has been obtained. The following prescription is very effective:

Ammonii iodidi	drs. 2
Extracti <i>grindeliæ robustæ</i>	m. 30
Tincturæ <i>lobeliæ</i>	dr. 1
Tincturæ <i>belladonnæ</i>	dr. 1
Syrupi <i>pruni virginiani</i>	oz. 1
Aquæ destillatæ, q. s. ad	ozs. 2

Dose: One teaspoonful three times a day.

The inhalation of amyl nitrite at the onset of an attack gives very prompt relief because of its relaxant effect to the bronchial musculature. There is, however, one objection to the use of amyl nitrite, namely, the patient becomes accustomed to it and soon increasing amounts are required until the limit of safety is passed. It is further contraindicated where there is arteriosclerosis of marked type, through danger of rupture of an artery.

An Attack may often be Aborted or Considerably Lessened by taking small, but frequently repeated doses of nitroglycerin (*glonoin*), say, 1-100 grain, during the premonitory stage or when the patient has engaged in some pursuit that generally gives rise to dyspnea.

The inhalation of spirit of chloroform combined with other antispasmodics may give relief when nothing else will. A combination something like the following may do:

Solutionis <i>magendie</i>	dr. 1
Extracti <i>belladonnæ</i>	m. 30
Spiritus <i>glonoini</i>	m. 30
Spiritus <i>ætheris compositi</i>	dr. 1
Spiritus <i>menthæ piperitæ</i>	dr. 1
Spiritus <i>chloroformi</i>	dr. 1

Directions: Take 20 drops on a lump of sugar.

Again, in some patients nothing so markedly lessens the paroxysm and gives relief as the inhalation of the smoke of cigarettes made from dried *grindelia* leaves soaked in a saturated solution of potassium nitrate. The following furnishes a serviceable *cigaret*:

<i>Hyoscyami foliorum</i>	0.60
<i>Belladonnæ foliorum</i>	1.2
<i>Stramonii foliorum</i>	1.2
<i>Pruni virginiani foliorum</i>	0.60
<i>Potassii nitratis</i>	0.60
Aquæ, q. s., or	15.0

Dissolve the potassium nitrate in the water, moisten the leaves, then roll into ten cigarettes. Of these three or four are to be smoked daily for the relief of dyspnea.

Also, a piece of blotting paper may be soaked in a saturated solution of potassium nitrate and potassium chlorate and burned, the patient inhaling the fumes.

If the paroxysms be so severe as to endanger life, quiet may be secured by a hypodermic injection of the following:

<i>Morphini sulphatis</i>	gr. 1-4
<i>Atropini sulphatis</i>	gr. 1-150
<i>Nitroglycerini</i>	gr. 1-100

A hypodermic injection of hyoscine, morphine and cactin gives immediate relief.

At the same time wrapping the chest in a hot mustard-pack is to be ordered.

GEORGE F. BUTLER.

Chicago, Ill.

ATYPIC ASTHMAS,

The designation, "asthma," is loosely applied to dyspneas of every variety. Nevertheless there is reason for not restricting the term to essential asthma, since the dyspnea attending emphysema and cardiac disease is a true spasmodic neurosis, and not explicable by the mechanical condition.

Dyspnea means difficult or accelerated respiration in which there is insufficient oxidation of the blood. (Greene) This may be induced by an obstruction to the respiration, by a loss of pulmonary surface, or by an impairment of the chemical exchanges of the blood. Cyanosis usually

coincides. Tonsillitis, croup, and anything that narrows the lumen of glottis, larynx, trachea or bronchi may cause dyspnea; so also the swelling of the mucous tissues from inflammation or the presence of membranous deposits or foreign bodies may induce dyspnea; but it requires the predominance of the spasmodic element to constitute asthma.

Further, there may be some obstruction due to stasis in the pulmonary area, as in case of mitral lesions, when the blood is backed up through the left auricle and the pulmonary veins, engorging the pulmonary capillaries, the pulmonary artery, and finally the right ventricle. This organ, by its powerful efforts, forces the blood through the congested areas and sustains the arterial circulation as long as compensation endures. The one effect of the lesion it does not relieve is the pulmonary engorgement, which, originally passive, becomes active as the ventricle hypertrophies. To some extent the dyspnea is here mechanical, but it often develops a spasmodic character and an intensity far greater than the mechanical derangement directly warrants. Moreover, spasmodic asthma is a frequent concomitant of cardiac lesions in which pulmonary engorgement is not present.

In Emphysema we have a diminution of pulmonary aerating surface, but the difficulty in oxygenation is here also enhanced by the spasmodic element which so frequently develops. This is also the case in fibroid infiltration, while comparatively small tubercular deposits may induce asthmatic seizures out of all proportion to the extent of lung-tissue involved.

Hemoglobin Deficiency.—In maladies involving a loss of hemoglobin the dyspnea is persistent rather than paroxysmal; although here, as in all the forms mentioned exertion is liable to induce the paroxysm. The more marked the spasmodic tendency, the slighter the physical effort that will arouse it. We see a patient who, while the asthmatic tendency is acute, cannot speak or attempt to raise the head or swallow without strangling, and, yet, when the asthmatic period has passed over, that same

patient can dance or climb the mountains without the slightest difficulty, although the emphysema or cardiac lesion remains.

Kidney Lesions.—Still more interesting are those cases where typical asthmatic attacks occur in persons whose kidneys are not eliminating sufficiently or whose blood is contaminated with fecal toxins. The asthma may here give warning of an approaching uremia. The form occurring with diabetes, foretelling coma, is known as air-hunger.

Dyspnea may occur upon exertion in chronic bronchitis, in large, latent pleural effusions, in convalescence, and in the obese. With dilated and fatty heart it is persistent, and increases as the circulation fails.

In all these complicated asthmas, when the dyspnea is largely spasmodic, although in part dependent on material obstructive lesions, the relaxants are usually inefficacious.

Glonoin gives speedy and certain relief. This may usually be confirmed and maintained by the simultaneous administration of hyoscyamine, pushed just up to the first indication of physiologic effect, in dryness of the mouth or sharpness of speech. To this strychnine arsenate may always be added with advantage. Strychnine arouses the vital forces and brings the reserves into action. The best results are obtained from small doses frequently administered, until the desired effect has been secured; as, for instance, glonoin, 1-4 milligram, hyoscyamine, 1-4 milligram; strychnine arsenate, 1-2 milligram; given together and repeated every ten to thirty minutes till effect. The antispasmodic action may be aided by applying mustard or ice over the right pneumogastric nerve in the neck.

The Failures will be those in which there is renal insufficiency and toxemia. If we look on an asthmatic attack as a warning to investigate the kidneys, liver and colon, we shall avoid the too common error of treating the symptom while neglecting to strike at the cause. It is not the loss of a little albumin that matters, but the persistent failure of liver and kidneys to eliminate their

full quota of solids. A daily output of 300 grains of urinary solids in an individual whose normal renal excretion should reach 1200 grains is surely a matter of too vital importance to be neglected. Cases in which an asthma has resisted diverse remedial efforts until accidentally a free catharsis ends the attack are not conducive to the reputation or the self-gratulation of the attending physician.

Climatology.—I am strongly tempted to dismiss the subject of climate with the remark that for each asthmatic the immunizing climate will prove to be that, where the mode of life, the habits, are such as best to keep the bowels open. But nobody has studied the climatology of asthma long without finding the subject beset with difficulties and contradictions. There is no rule—every case constitutes one more exception. When a patient reports freedom at any one place, let that be his home henceforth. Years of freedom do not allay the tendency to returning paroxysms on deserting the place of refuge and returning to the scene of former tortures.

Adrenalin.—I have made little use of adrenalin as a remedy for the relief of the paroxysms, although it has been enthusiastically urged by several of my medical friends, who have found it effective in their own cases. But in the few instances where I have used adrenalin the results have been similar to those following the use of asthma powders, namely, immediate relief, then the dyspnea recurring more and more frequently and severely until all effect seemed to be lost. However, the matter is not to be decided by a few cases, and we may have a remedy of inestimable value in adrenalin.

Further Studies are Needed.—Dr. Otto Lerch of New Orleans has traced a connection between asthma and persistence of the thymus gland, and between asthmatic tendencies and splachnoptoses. His observations have opened up a new and interesting field for inquiry. They serve to illustrate the wisdom of a maxim of Gross—to treat any abnormality detected, no matter if no connection be traceable between it and the malady present. It also shows the value

of the x-ray and other modern methods in adding to our diagnostic powers.

The remedy indicated in enlarged thymus is ergotin; on splachnoptosis, berberine.

WILLIAM F. WAUGH.

Chicago, Ill.

PHYSIOTHERAPY IN THE TREATMENT OF ASTHMA

The condition known as asthma is due to contraction of the bronchial muscles. The exciting cause of such contraction is some irritation originating in and emanating from the nervous system. The convenient term "reflex spasm" is used to designate the obscure etiology of asthma. It is needless to say that in these days of exact reasoning in medicine the insufficiency of the above explanation is generally recognized.

Etiology of Asthma.—In many instances the cause of asthma can be clearly isolated and defined. Thus we speak of cardiac asthma, renal asthma, etc. In view of the fact that the asthma in these cases is secondary to disease of the heart, the kidneys, etc., it is called secondary asthma, while the term primary asthma is applied to cases of asthma in which the exciting cause is not apparent and the asthma, therefore, presents itself as a condition *per se*. It is perhaps safe to say that with increased knowledge of the subject and more exact diagnostic analysis of the individual case the number of cases of primary asthma so-called is constantly decreasing. Under the head of secondary asthma we nowadays classify the so-called emphysematous asthma which at one time was recognized as a distinct variety.

The term "nervous irritation" admits of endless application. It may serve as a mantle of ignorance to conceal some form of autointoxication, the asthmatic attack being due to a toxemia affecting a nerve center or a nerve trunk. The vagus is frequently the direct seat of irritation. Sometimes asthma coexists or alternates with other neuroses, such as epilepsy, angina pectoris, etc. Asthma has been traced to the existence of nasal polypi and their interference with

respiratory function. Menstruation has been known to produce attacks of asthma. Even psychic factors are recognized in connection with the etiology of asthma. The relation of asthma to certain metabolic disorders like gout, rheumatism, skin-diseases, etc., is well established.

Find the Cause—In treating a case of asthma it is of fundamental and over-towering importance to find the cause. We are safe in considering asthma a symptom, pure and simple. Treatment, unless we are satisfied with symptomatic relief, depends on the cause and our ability to remove it. Remember that the term "reflex symptom" is reality means nothing unless we are able to connect intelligently the symptom and the underlying cause. The latter is ordinarily one of two varieties, to wit: some form of autointoxication (kidneys, alimentary canal, etc.) or a mechanical irritation (e. g. nasal polypus, passive hyperemia in the lungs, insufficient heart's action, etc.). Adapt your therapy to the cause. Remove the nasal polypus, cure the dilated stomach or the prolapsed bowel, tone up the heart's action, study the therapeutic indications in renal diseases and apply them *pro renata*, relieve gout, rheumatism and other disturbances of metabolism, etc., etc. The asthmatic condition will then take care of itself.

Asthma and Tuberculosis.—It is an interesting fact that persons suffering from asthma hardly ever contract tuberculosis. This is due to the passive congestion of the lungs which is found in cases of asthma. Wherever there is chronic pulmonary congestion (heart disease, renal trouble, chronic bronchiectasis, etc.) tuberculosis, as a rule, does not develop. This is Nature's classical example which furnishes the therapeutic indication for Bier's hyperemia in such a variety of conditions. In some cases of pulmonary tuberculosis Bier's hyperemia induced by a suction-mask has been found very serviceable. So much for the treatment of the person who suffers occasional attacks of asthma.

The Treatment of the Asthmatic Attack must necessarily be symptomatic.

Here we are not removing a cause, but trying to relieve a distressing symptom. Those of my readers who have studied previous lessons will have no trouble in understanding the following therapeutic directions which are applicable to the attack, not to the condition:

1. Galvanization or faradization of the vagus for ten minutes. This is a very effective remedy.

2. Percussion of some of the respiratory centers located in its spinal cord. Percussion may be produced by tapotement, by a percussion-hammer, by a powerful interrupted douche (preferably cold), and static sparks, if a static machine can be had.

3. Derivation to the lower extremities according to any one of the many methods mentioned. Kneipp's "walking in wet grass" enjoys a well-merited reputation in this connection.

4. Thoracic gymnastics (Swedish methods) discreetly applied, as described in a previous lesson. The object is to prolong and intensify inspiration and to shorten expiration.

5. When the heart is sound, thermic shocks can be safely administered. A plunge-bath is not without danger but often wonderfully effective in breaking up an attack. The same holds good in regard to all "reactive" general applications of heat and cold.

OTTO JUETTNER.

Cincinnati, O.

SOME PNEUMONIA COMMENTS

One of our recent lessons was devoted to a study of pneumonia. In the "comments from the class," members of which report below, we give some outline of the ideas of those who have had extended experience in its treatment, especially by the alkaloidal method.

We hope that students will comment freely on every lesson. These "talks" we consider one of the most interesting features of our Post-Graduate Course. Will not every one "chip in" with a word or a suggestion.

Treatment of Pneumonia.—Dr. John Stewart of Monon, Indiana, gives his method of treating pneumonia as follows:

"I always clean the alimentary tract, giving small doses of calomel or calomel and podophyllin combined, followed by a saline or some preparation that will take the place of the saline. Then I apply over the lungs, and well up over the neck, flannel wrung out of a hot epsom-salt solution, using one ounce of epsom salt to each pint of water. Formerly I used antiphlogistine, but I find the epsom-salt solution more satisfactory.

"In respect to medication I depend upon the indications. In the first stage there is usually an active condition of the circulation, the pulse, strong, full and bounding. This is the indication for veratrum. I generally use Norwood's tincture, or a combination of veratrum and opium. Teaspoonful every hour till the temperature is down to 100° F., then every hour. The paregoric is for its effects upon the heart. It also relieves the cough.

"When the case is one between the asthenic and sthenic, it is well to combine aconitine and veratrine and digitalin. The fever is thus controlled and the heart sustained.

"I always give strychnine in small doses with the sedatives. It may not appear theoretically correct, but the clinical results are satisfactory. We need to beware of using veratrum on fat people on account of their heart's condition.

"When the pulse is small and frequent showing that the heart's action is defective and that it is seeking to make up for lack of power by its frequency, aconite or aconitine should take the place of veratrum. Aconite given in this way, is not a heart depressant.

"If the skin is dry and parched I give pilocarpine nitrate in 1-67-grain doses every half hour till the skin becomes moist. It has never failed me in this respect.

"Outside the above I seek to meet the indications as they arise. If the tongue is covered with a dirty, pasty, white-furred coat, indicating excessive acidity, I give sodium sulphate. If the tongue is dry and full and red, indicating excessive alkali-

linity, I give hydrochloric acid to overcome this condition. When the tongue has a moist, yellow, pasty coating, the breath fetid, chlorate of potassium will correct this condition.

"As soon as resolution begins, I begin to give ammonium chloride in 10-grain doses. This aids in dissolving the material plugging the bronchioles and stimulates the system."

Other Suggestions on Pneumonia.—Dr. W. P. Barron of Carmona, Texas, has presented an interesting paper on pneumonia and among other things says regarding the treatment of pneumonia:

"Given a typical case of pneumonia, after unloading the bowels, and giving a hot all-over sponge bath of epsom-salt solution, I give aconitine, gr. 1-134, digitalin, gr. 1-67 and cactin gr. 1-67 every half hour until effect, then less often. In case my patient shows weakness I add strychnine arsenate, gr. 1-134 or gr. 1-67, to the above. If the fever be very high I add veratrine, gr. 1-134 to gr. 1-67. If cerebral symptoms are present I give gelseminine in dose sufficient to quiet. If dull and stupid, with cold extremities I use atropine. I apply Lloyd's libradol to the chest, renewing if needed and push the sulphocarbolates dissolved in hot water. I give bryonin if the pain in the side be severe, sometimes with morphine. I use the epsom-salt baths every three hours. At night I give enough chloral to produce quiet sleep. Cactin will eliminate a distressing crisis if given throughout the disease. I have tested it many times. (But remember! Up to date it has never killed a dog, nor has a guinea pig been called to his long home by it.) I see that the patient has plenty of fresh air, water and nourishment."

Dr. Barron cites the following case which looks very much as if he had aborted pneumonia in one instance anyway. The doctor is a firm believer in so-called abortive treatment of pneumonia. We quote his exact words:

"An old lady, 80 years of age, with pneumonia, was one of the cases that helped to convert me to the alkaloids. She had been ill four days when I first saw her and I

thought her practically dead. I gave her dosimetric trinity and glonoin, a granule each every half hour for twelve hours, the temperature falling in that time from 105° to 102.6° F. I gave it then every hour until the pulse came down to from where I couldn't count it to 78. In two days she was free from fever and almost well. The granules were given in hot water each dose. Three doses of castor oil were also administered the first day, followed by sulphocarbolates regularly throughout the case. Fortunately I have not had a case occur in very young children. If I should I would treat it upon alkaloidal principles.

"Every year I have cases showing typical clinical pneumonia. Alkaloidal treatment pushed to effect aborts these cases in from twenty-four to forty-eight hours. This leads me to the opinion that any pneumonia case taken in time may be aborted, with the exceptional cases found in all disease conditions."

Some Pneumonia Cases.—This month we have some very interesting reports from doctors, giving their treatment of pneumonia and citing cases. Dr. W. Herington, of Green City, Mo., reports the following cases:

"March 18, 1910, I was called to see a young fellow who had had the measles, and I took the temperature, which was 105° F., and lung examination showed bronchial breathing, anterior and posterior, in the right upper and left lower lobe with pain accordingly. Respiration 42 per minute. Tongue furred, whitish-yellow, breath offensive and a very aggravated cough. I said catarrhal pneumonia and here is the way I fixed it. I gave 1-6 grain podophyllin every hour till the bowels acted freely, then I ordered a saline cathartic. For fever, aconitine and digitalin, gr. 1-134 each every thirty minutes until the fever came down and pulse came to 80. The pulse was 120 per minute. After ten hours, pulse 72, temperature 99° F. Bowels acting freely and now he is convalescing nicely. I also gave calcein, 1-3 grain every hour.

"Another case, an old lady 72 years old. I diagnosed the case as one of catarrhal pneumonia. There was muttering and de-

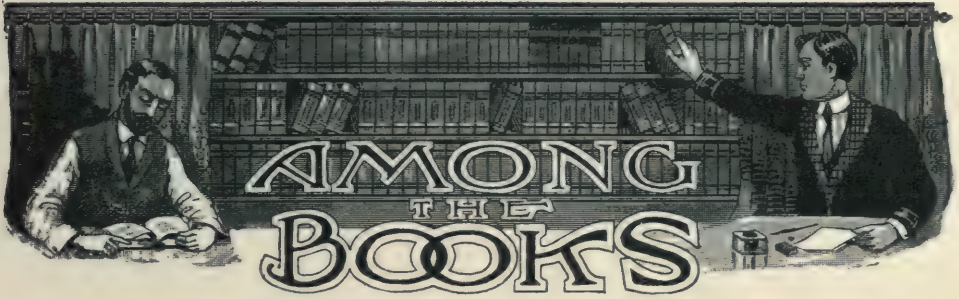
lirium and corphologia, with loss of control of sphincters for ten days. Tongue heavily coated and 'dry as a bone' and cracked till almost bleeding; temperature 99.1° to 101° F. Well, if that wasn't a stunner where do you find one? I ordered castor oil and oil of turpentine every evening, eggnog every two hours with whisky, strychnine gr. 1-67 and four drops of nuclein every three hours; 5 grains of chloral hydrate were given every hour till quiet. The bowels just simply opened up and *run* and I said, 'Let 'em go,' and gave more oil, turpentine and more nuclein and whisky and now she is well."

Next Month Tuberculosis.—We shall study pulmonary tuberculosis in our Post-Graduate course next month. Short articles to appear in these columns will be welcomed. Bring in your share to our feast of good things.

EXAMINATION QUESTIONS

[NOTE.—The questions are purposely limited in number, because we desire to ask our students to treat the various individual questions quite fully, in their replies.]

1. Discuss the various conditions which may produce asthma, and give the most important points for differential diagnosis.
2. What is the difference between primary and secondary asthma? Is the term "Primary Asthma" ever justified?
3. What forms of asthma are not in great danger of being complicated with tuberculosis? Why?
4. What therapeutic inferences may be drawn from the facts alluded to in question 3?
5. Give the treatment of asthmatic paroxysms.
6. What danger is there in limiting the treatment of asthma patients to the paroxysms?
7. Give the general drug treatment of asthmatics.
8. Give an outline of the general management of such cases.
9. Give the dietetic management of such cases.
10. Describe one case, which you have seen.



JOHNSON'S "SURGICAL DIAGNOSIS"

Surgical Diagnosis. By Alexander Bryan Johnson, Ph. B., M. D., of Columbia University Medical College. Volume III. The Spine, The Nerves, The Pelvis, The Extremities, Appendix. With one colored plate and two hundred and seventy-four illustrations in the text. New York and London: D. Appleton & Co. 1910. Price \$6.00.

This volume concludes the monumental work of the author upon which he labored for twenty-five years in the best place where surgical diseases and injuries are most apt to occur, namely, in New York City and in the hospitals where one who is prepared for it, as this author eminently is, can study them. Sold only in complete sets.

EDWARDS' "PRACTICE OF MEDICINE"

A Treatise on the Principles and Practice of Medicine. By Arthur R. Edwards, A. M., M. D., of Northwestern University Medical School, Chicago. Second Edition, thoroughly revised. Illustrated with 100 engravings and 21 plates. New York and Philadelphia: Lea & Febiger. 1909. Price \$5.50.

In our review, last year, of the first edition of this book (page 433) we said: "This book is written for the practising physician whose aim is, as it always should be, the cure or alleviation of disease. The author strives, in treating each disease, to give the pathologic etiology of it and the proper therapeutics to meet it. It is in every way

a modern treatise, built on the scientific observation of disease."

With this noble ambition to be useful to his kind—as a born physician can be most (*medicus nascitur, non fit*)—the author revised his work, and we have to thank him for this. We rejoice that he has caught the advancing sound-waves of suffering humanity crying for therapeutics, more therapeutics without less of other medical knowledge, to the constant increase of which he has been assiduously attentive. And so we have Dr. Edwards' book up to all that is good and true and reliable in our work for humanity.

THOMPSON'S "DIETETICS"

Practical Dietetics, with Special Reference to Diet in Diseases. By W. Gilman Thompson, M. D., of Cornell University Medical College. Fourth Edition, illustrated, enlarged and completely rewritten. New York and London: D. Appleton & Co. 1909. Price \$5.00.

That the *materia alimentaria* is as important as the *materia medica* ought always to have been accepted as an indisputable truth is indisputable at the present day. And there are people that go even further and claim that diet can *cure* disease without medicine. To this class the author and the book before us does not belong, as he says, in the preface: "The author disclaims advocacy of any special dietetic theory or 'system.' No one food is curative of any disease, just as no one food may be said to be causative to any disease." Yet he has given us four editions of his excellent book

since 1895, and the present the best of them all.

This octavo book of some 900 pages, comfortably printed, contains an amount of information about foods, their origin, production, preparation, suitability in health and disease or convalescence which can not but be welcome to the progressive physician of today.

The author divided his subject into nine parts, which are as follows: (1) Foods and food preparation. (2) Stimulants, beverages, condiments. (3) Cooking, food preparation and preservation. (4) Special conditions influencing foods. (5) Food digestion and conditions affecting it. (6) General relations of food to special diseases. (7) Administration of food for the sick. (8) Diet in disease. (9) Rations and dietaries. In the latter chapter the author shows his decided nonsectarianism and his distance from the evil spirit of ipsedixitism. The book concludes with a valuable appendix. We augur for this book a hearty reception by the medical profession, both at home and abroad.

"AMERICAN PRACTICE OF SURGERY"

American Practice of Surgery. A Complete System of the Science and Art of Surgery by Representative Surgeons of the United States and Canada. Editors: Joseph D. Bryant, M. D., LL. D., and Albert H. Buck, M. D., Complete in 8 volumes, profusely illustrated. New York: William Wood & Co. 1909. Price \$7.00.

Volume VI of this collective work, now before us, continues with "Regional Surgery," which began in the preceding volume with the surgery of the head and left off with that of the larynx and trachea. In the present volume are considered the work of prosthesis in the regions of the face, mouth, jaws, and nasal and laryngeal cavities, and further the surgical diseases and wounds of the nasal cavities and accessory sinuses. The anatomy of these parts is reviewed, and transillumination and the use of the x-ray also are discussed. Then come surgical diseases and wounds of mouth, tongue

and salivary glands, the same of the neck, thyroid and thymus; surgery of the thorax and spinal column; surgical diseases and wounds of the female breast; the same of the male genital organs, including chancroid and gonorrheal urethritis; lastly, surgical diseases and wounds of the jaws.

Notice is given that the articles by the late Dr. McCosh on the "Treatment of Infectious Peritonitis and Appendicitis" will appear in Volume VII. The work proceeds undiminished in its excellency and comprehensiveness, as was promised from the very beginning.

CABOT'S "PHYSICAL DIAGNOSIS"

Physical Diagnosis. By Richard C. Cabot, M. D., of Harvard University. Fourth Edition, revised and enlarged. With 5 plates and 240 figures. New York: William Wood & Co. 1909. Price \$3.00.

The author gives in this book only that which he knows from his own experience, which is a great deal, and comprises the subtle and refined methods and keen perception of the senses up to which modern clinicians have brought the art of diagnosis. He says he does not say anything of cystoscopy, ophthalmoscopy and laryngoscopy, because he is not personally acquainted with those methods, but he believes that familiarity with the latter will sooner or later be required of every internist. The author does not copy from other books about which he does not know into his own. An author who does not figure as a knowallist is most to be confided in.

KIMBER'S "ANATOMY AND PHYSIOLOGY FOR NURSES"

Anatomy and Physiology for Nurses. A Textbook Compiled by Diana C. Kimber, Graduate of Bellevue Training School. Third Edition. Revised by Carolyn E. Gray, Assistant Superintendent, New York Training School for Nurses. New York: The MacMillan Company. 1909. Price \$2.50.

This textbook for nurses is of a higher order of instruction and is designed for

persons having had a preparatory education in high schools and who have a taste for study. Of the true scientific nurse the same must be said as what is true of the physician, namely, he is not made but is born. For such a one this book is admirably suited. A self-made nurse like a self-made man is usually badly made.

SNOW'S "MECHANICAL VIBRATION"

Mechanical Vibration and Its Therapeutic Application. By M. L. H. Arnold Snow, M. D., of New York School of Physical Therapeutics. New York: Scientific Authors' Publishing Company. 1904. Price \$2.50.

This book has been written "to call attention to the fundamental principle" of massage, which may give reason for or against mechanical-vibration apparatus. From this point of view the book is very valuable as it is thorough in words and illustrations.

CORNER'S "DISEASES OF THE MALE GENERATIVE ORGANS"

Diseases of the Male Generative Organs. By Edred M. Corner, M. D., B. Sc., of St. Thomas' Hospital (London). London and New York: H. Frowde, Oxford University Press. Price \$1.50.

This book is one of the excellent medical manuals published by the Oxford University Press of London and its extensive branch in New York City. As there ever is a predelection in human nature for things "of our own," it is well to remember that there is always room in him who has learned much to learn in addition some good things from abroad. The German fully appreciates what he learns from abroad, and so when wishing to deprecate anything he says, "*Es ist nicht weit her*" ("It does not come from very far"), while, on the contrary, the English in his depreciation of anything says, "It is far-fetched."

The redeeming feature of our much-mixed-up and much-and-everything-questioning age is its ever-growing cosmopolitanism and of which the publications of the Oxford Uni-

versity Press may be accepted as a gratifying token. The little manual before us is an excellent little token of that token, and the general practitioner as well as the surgeon and specialist will find in it much valuable matter for appreciation.

The author has selected the following topics for consideration: (1) Hydroceles and hematoceles. (2) Physiology of the testicle. (3) Wandering, or movable, testicle. (4) Imperfectly descending testicle. (5) The testicle in relation to blood supply, ducts, inflammation and operations. (6) Atrophy and hypertrophy of the testicle. (7) Torsion of the testicle. (8) Epididymitis, orchitis, and other diseases of the testicle. (9) The functional affections. (10) Spermatic-cord diseases. (11) Diseases of the vesiculæ seminales. (12) Diseases of the urethra. (13) Diseases of the prepuce and penis. (14) Diseases of the scrotum. These topics are illustrated with 41 drawings. This manual is a *parvum* containing *multa*.

POYNTON'S "HEART DISEASE"

Heart Disease and Thoracic Aneurism. By F. J. Poynton, M. D., F. R. C. P., of the University College Hospital. London and New York: H. Frowde, Oxford University Press. Price \$1.50.

This book gives in outline the most modern clinical methods of investigating cardiac troubles, acute, chronic and congenital, besides prescriptions for treatment.

WHARTON'S "MINOR SURGERY"

Minor and Operative Surgery and Bandaging. By Henry R. Wharton, M. D., Surgeon to the Presbyterian Hospital, Philadelphia. Seventh edition, enlarged and thoroughly revised. With 555 illustrations. Philadelphia and New York: Lea & Febiger. 1909. Price \$3.00 net.

"*Tempora mutantur, nos ei mutamur in illis.*" There was a time when an amputation of the thigh anywhere or at the hip-joint would not have been considered as *minor* surgery, nor would have been operations on the stomach and abdominal viscera.

But Dr. Wharton devotes many and many a page to the surgery of these organs in his excellent book on *minor surgery*. However, it is better to provide the student and general practitioner with too much rather than with too little, provided the provisions are good, and what Dr. Wharton presents is excellent. But if we were to give the Doctor a special encomium it would be for his chapters on a sepsis, bandaging, and bacteriology.

SNOW'S "THERAPEUTICS OF LIGHT AND HEAT"

The Therapeutics of Radiant Light and Heat and Convective Heat. By William Benham Snow, M. D., late Instructor in The New York Postgraduate School. New York: The Scientific Authors' Publishing Company. 1909. Price \$2.00.

An important book on an important subject in light- and heat-therapy, with which the progressive physician has nowadays to be acquainted if not familiar. The old convenient and therefore inabrogatable medicamentous remedies, like all good rules, have their exceptions too, owing to objective and subjective reasons both in physician and patient. The physician at the bedside is like a strategist confronting an enemy's host and he must have various arms ready at hand and be ready to call them into action opportunely. This book gives information about the arms of light and heat, and the information is reliable and up to date, but gives no guarantee against possible change and better information still.

MEYER'S "BIER'S HYPEREMIC TREATMENT"

Bier's Hyperemic Treatment in Surgery, Medicine and the Specialties. A Manual of Its Practical Application. By Willy Meyer, M. D., of the New York Postgraduate Medical School and Hospital, and Victor Schmilden, M. D., Assistant of Professor Bier at the University of Berlin, Germany. Second Edition, revised and enlarged. Illustrated. Philadelphia and

London: W. B. Saunders Company. 1909. Price \$3.00.

Bier's method is yet *sub judice*, and so the wide-awake general practitioner, to whom this method is of special promise, should welcome every further information on this subject, as this second edition gives.

HARE'S "PRACTICAL THERAPEUTICS"

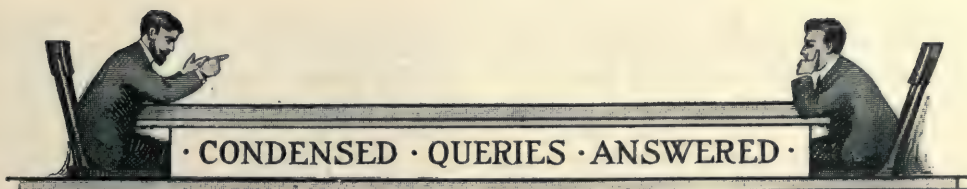
A Textbook of Practical Therapeutics, with Special Reference to the Application of Remedial Measures to Disease and Their Employment upon a Rational Basis. By Hobart Amory Hare, M. D., B. Sc. Thirteenth Edition, enlarged, thoroughly revised and largely rewritten. Illustrated with 122 engravings and 4 colored plates. Philadelphia and New York: Lea & Febiger. 1909. Price \$5.00.

There is no need of anyone's writing an encomium on this book. There will be but few educated physicians of any school in this country who do not know Hare's "Therapeutics" or at least know of it from reference to it in medical literature. All we need to say is that the author brought this edition up to the very date it went to print. Hare is reliable, sympathetic, and a true born physician and medical teacher.

HORT'S "IMMUNIZATION"

Rational Immunization in the Treatment of Pulmonary Tuberculosis and other Diseases, comprising a paper read before the Royal Society of Medicine, March, 1909. By E. C. Hort, B. A., B. Sc. New York: William Wood & Co. 1909. Price \$1.00.

This work comprises the discussion of the following subjects: (1) Relation of treatment by inoculation to other methods of treatment. (2) Critical review of the present position of heteroinoculation. (3) Unreliability of the tuberculoopsonic index as at present estimated. (4) Autoinoculation, spontaneous and artificial; history; value and limitation. (5) Autolysis, autolytic toxemia. Antiautolytic defense. The antitryptic index.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5576.—“Castration Under Stovaine Anesthesia.” O. B. W., Virginia, desires to know whether he can, under local anesthesia with stovaine solution, without giving chloroform, remove a testicle without pain or danger to the patient. He fears the volatile anesthetics owing to the age and condition of his patient.

Unquestionably you can use such a local anesthetic and castrate your patient without causing pain or placing him in danger. It would be necessary, however, to produce hyoscine-morphine narcosis first. Read the special literature on this subject and closely follow the technic outlined.

If the patient is only lightly narcotized, inject the stovaine solution *into* the cutis (not into the subcutaneous tissue), along the line of the intended incision. Wait three or four minutes, then incise the skin and infiltrate the underlying tissues. The patient possibly may move a little as if feeling pain when the cord is tied or the testicle enucleated, but an hour later he will not be conscious of having suffered pain. The sharp command, “Lie still now,” will be obeyed by him. You can, of course, give a whiff or two of chloroform just before making the primary incision. But if you do this you will not need to use a *local* anesthetic at all. As a matter of fact, we should not attempt to remove the testicles under local anesthesia alone. The patient necessarily would be more or less conscious of distress, and mental shock is undesirable.

sustained a burn $2\frac{1}{4}$ by $1\frac{1}{2}$ inches in extent on the occiput from a live wire. He failed to get skin for graft and still has a dime-sized wound that persists. Various dressings have been used, most recently proto-nuclein and later bovine on iodoform gauze. A treatment that will complete the healing process is desired.

Cleanse thoroughly with hydrogen-peroxide solution; cut away or curet any necrotic tissue or sloughing floor; then apply pure oil of turpentine (Merck) with a camels-hair brush; snugly fit into the ulcer a piece of gauze saturated with oil of turpentine, cover with another pad of gauze, a handful of cotton and a snug bandage. Repeat this dressing daily until granulation is established and the edges close in. Now place a few pin-point grafts upon the surface, after cleansing with boric-acid or normal salt solution (taking these “pin-point” grafts from the thigh or the arm of the patient). After placing them, flood the area with bovine or sanguiferrin, cover with a piece of rubber tissue or oilsilk perforated freely with pin-holes; over this lay a piece of gauze soaked with the bovine blood, then another piece of rubber tissue or oilsilk (unperforated), and bandage in the usual manner. Dress twice daily (not removing the perforated tissue unless signs of secretion or pus are evident), and then every second day, with great care, catching one corner of the tissue with a pair of forceps and “floating it up” with boric-acid solution thrown under it with a dropper.

QUERY 5577.—“Burn from Live Wire.” O. W. H. Illinois, is treating a boy who

To secure the skin for grafts take a long, sharp needle or a fine bistoury and catch

the skin and lift it up. Then with a pair of small scissors snip off a little point, using the curved scissors, and lift the minute particle of skin directly onto the wound, raw surface down. These grafts should set about one-eighth inch apart. Thus, if you do the work right, nine out of ten of them will live.

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 QUERY 5578.—“Regarding Bull-nettle—W. J. H., Nebraska, desires information about bull-nettle. “I was told by a physician,” he writes, “that it is a ‘wonderful remedy.’ I can’t find it mentioned in any of my books, and am satisfied if it is worth having, you have it; and if you do, I want to know all about it.”

There has been written considerable in these columns, in the past, on bull-nettle. Burgess recommends this drug very highly in the treatment of syphilis, but we have tried out his preparation and cannot say that it proved particularly effective.

Solanum carolinense (the horse- or bull-nettle) contains two active constituents (alkaloids) existing together to the extent of about 1.3 percent in the fruit, and of 0.4 percent in the root, about two-thirds of these appearing to be solanine, while the remaining one-third has been called solnine by John Uri Lloyd. Small quantities of a peculiar resin and volatile oil also occur. Solanine (the alkaloid) is unquestionably the active principle and will, we believe, produce any therapeutic results obtainable from any preparation of *solanum carolinense*. This plant is also known as the “apple of sodom,” band-brier or tread-leaf, and is fairly common throughout North America. Cattle in the southern states are frequently poisoned from browsing upon the herb. If you desire to go further into this matter, you might address Dr. Burgess, Avondale, Tenn., for literature on bull-nettle. It might interest you also to read the doctor’s book, the “New Field.”

Burgess states that the “bull-nettle” he refers to is *jatropha stimulosus*, which would make it a member of the spurge family (euphorbiaceæ); yet in his books he says, “*Jatropha stimulosus* (bull-nettle) is a

species of *solanum*, and some say identical with *solanum carolinense*.” Purslane-spurge, purging parsley, apple-root, or *E. cecrollata*, is the most-widely found and best-known member of the spurge family. It is emetocathartic. However, none of the spurge family at all resemble *solanum carolinense* or any *solanum* plant. For description of these drugs see the Dispensatories, or other reliable textbook.

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 QUERY 5579.—“Tasteless and Hypodermatic Cathartics.” F. G. T., Florida, wants to learn of the most nearly tasteless cathartic, the best hypodermic cathartic, and the most effectual purgative.

Phenolphthalein is a cathartic that practically is tasteless. As to a hypodermic cathartic, there is no really satisfactory one. We have experimented extensively in this direction, and while finding that arecoline acts beautifully in veterinary practice, this drug should not be given to human beings. Magnesium sulphate (C. P.) 2 grains dissolved in plenty of sterilized water, may be thus administered and is said to produce fairly copious stools in a short time. Recent experiments, made by Abel and Rowntree, show that phenolphthalein and its tetrachlor derivative, phenoltetrachlorphthalein, are quite effective and nonirritant hypodermic (or intravenous) cathartics when used in oil-solution. A solution of phenoltetrachlorphthalein containing 0.4 Gm. (6 grains) induces a laxative action lasting from four to six days. This substance is excreted by the liver only, being reabsorbed from the bile solution by the large intestine. This probably explains its prolonged or “cyclic” action.

“What is the most effective purgative?” This question must be modified before an intelligent answer can be offered. Conditions necessarily control the selection of the drug, while a remedial agent which might prove the most effective purgative in one case might fail in another. For instance, calomel and podophyllin (or blue mass and soda with podophyllin) in small divided doses is the purgative most often indicated, and this combination is nearly always

effective. Then, again, however, apocynin or elaterin may prove the most effective, while in another instance we possibly will be inclined to depend upon castor oil with or without the addition of croton oil.

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 QUERY 5580.—“Supposed Ptomaine Poisoning.” J. J., Iowa, describes the case of a man about 45 years of age who while in the West “got ptomaine poison from eating mutton,” and was very sick for two weeks, when he returned home. In about one week he came down with a chill and high fever (104° F. temperature). Two weeks after he had another attack, and this time there was some vomiting. His skin is copper-colored. His abdomen becomes bloated badly every day, no matter what his diet; but he feels like eating almost any time. The first time he was taken sick his stomach was washed out and bowels were thoroughly cleansed, the latter having been kept active since. After having the chill for several days, his lips and finger-nails were blue. He is up and around except when he has the chills and fever. “His chills are a great deal like the ague chill.” He is stronger than a month ago. At the time of his chills he has been given quinine, hydrastine and strychnine; the bowels were opened up with calomel followed by a saline laxative. The quinine and hydrastine did good at the time, but other preparations for the bowels did not prove effective. Copper arsenite was given, but there does not seem to be much improvement.

A case of ptomaine poisoning is, as a rule, either cured or it passes beyond the administration of the physician within forty-eight hours. There is something more than “ptomaine poisoning” here, and we would strongly urge you to send to the laboratory, for examination, a specimen of urine, and a blood smear. Addison’s disease must be thought of. Examine the buccal mucosa and palpate carefully the liver and spleen; state the areas of dulness. It might be well to send a specimen of the stomach-contents (secured an hour after the regulation test-meal of toast and tea) for chemical and microscopical examination.

On general principles give, in this case, blue mass and soda, with iridin and leptandrin, half-hourly for four doses, every second night for a week. Quinine hydroferrocyanide, berberine, nux vomica, and capsicum every three hours; euonymin and chionanthin before meals; a laxative saline every morning on rising. Hot salt sponge-baths will prove helpful.

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 QUERY 5581.—“Administering Nuclein in Discs.” E. P., New York, writes: “Can I saturate sugar-of-milk tablets with the nuclein solution and not injure the property of the medicine?”

Yes, there is absolutely no objection to this procedure. Homeopathic “discs” are frequently utilized in this way. However, it is infinitely better to employ tablets which contain a definite amount of sodium nucleinate in a portable form or to drop the solution itself (with a dropper) under the tongue of the patient, allowing it to be absorbed from the buccal mucosa.

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 QUERY 5582.—“The Treatment of Stricture.” F. E. W., Mexico, asks, what, if any, are our especial methods for the reduction of stricture, other than electric cautery.

Some strictures can be cured by gradual dilation, together with the use of bougies consisting of thiosinamin, papayotin and glycerole of pepsin. We are experimenting with a formula which we believe will prove extremely efficacious.

Thiosinamin injections should be given only when the fibrous form of stricture exists. Strictures can also be destroyed by the galvanic current. (If you have a copy of “Alkaloidal Practice,” refer to page 616.) The treatment called for in spasmodic stricture naturally would not be effective in the fibrous (cicatrical) type. Mild inflammatory conditions with engorgement of a limited area of mucosa will yield to eliminants, sedatives, the injection of a solution of lobelin, and the passage of cold steel sounds. In hyperesthetic conditions arbutin, eupurpurin and scutellarin should be given a trial. Thymol iodide in olive oil is applied locally with advantage. Carben-

zol or ichthyol are extremely useful in the earlier stages of stricture. They may be applied even after section with the urethrotome.

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 QUERY 5583.—“Infantile Eruption.” J. M. S., Michigan, was called to see a baby nine months of age, who has two teeth. She had a “breaking out on several places, under one arm, on thighs, on neck and face, in size from a pinhead to that of a dime. The skin breaks, a scab forms, and it heals in three or four days.” The doctor wants to know whether the eruption is caused by teething. Bowels are constipated, suppositories or laxatives being used every day. Otherwise the child seems perfectly healthy.

It is impossible for us to prescribe very intelligently for the infant without a much clearer idea of conditions. Eruptions frequently occur during teething and are due as a rule to autotoxemia. It would be well to examine the baby's food closely. It may be that she is overfed, or getting too much starch. An examination of the urine will probably reveal a disordered body-chemistry.

A few doses of calomel with aromatics, followed by “saline lemonade,” will help out. Minute doses of sulphur and podophyllin two or three times daily also seem to be indicated. There are few derangements of the human body which are not caused, at least to a certain extent, by some gastrointestinal disturbance.

With the digestive tract swept free from fecal and effete matter and presenting a clean absorptive mucosa, we are restoring normal conditions in one of the most important working parts of the body mechanism. If at the same time we secure skin and kidney activity, and see to it that the system does not receive more food material than it can take care of properly, we are going a long way toward establishing perfect health. This rule applies particularly in pediatrics.

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 QUERY 5584.—“The Economy of the Alkaloids.” H. E. T., Indian Territory, considers the alkaloids “very nice.” There is, he says, only one objection, and that is the price. “To illustrate: Of specific

echinacea I add, as a rule, 1 dram to a 3-ounce mixture, dose one teaspoonful. If I were to use your granules of 1-2 grain, it would take 60 to equal the 1 dram of the fluid extract, costing more than 6 cents, while the former would be less than 3 cents. It looks to me as if I could practically double my expense account on drugs. If I am in the wrong, I want to be put right, as you have many drugs listed that I desire to use every day.”

As a matter of fact, Doctor, the alkaloids are the most economical medicinal preparations obtainable today. In the first place, they are *absolutely* and *evenly* effective. Each granule may be taken, as we have pointed out elsewhere, to represent the smallest known-to-be-effective dose for an adult. If instead of treating named diseases you diagnose closely and give for the pathologic conditions present the indicated remedies in small repeated doses to effect you must get results—and rapidly. Your selection of echinacea as a basis of comparison is rather unfortunate. In the first place, this is a concentration, *not* an alkaloid or glucoside, and therefore cannot be considered representative. However, one tablet equals 10 minims of the fluid preparations, and two to three tablets would be an *average* full dose. That means 33 doses for 15 cents. Not “very expensive,” convenience and quality considered, is it?

The positive therapist using definite doses of dependable remedies cures his patients in one-third the time usually consumed by the old-style practitioner. Indeed it is not at all uncommon for his typhoid or pneumonia patient to be ready for discharge in a week. You know how long patients remain under treatment when treated in the regular way. These are the days when people want to be “shown;” when even sick people demand results. As a consequence it is the doctor who “does things” and who does them with the least medicine who gets the practice. It need not be pointed out that the man who gets the practice also gets the money.

Further, we would point out the fact that by absolute count not less than fifty thousand

physicians are using the alkaloids. Of these men thousands have frankly stated that success came to them with the adoption of the active principles, and almost an equal number have written at one time or another that the alkaloids save them money—not only save but make the dollars.

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 QUERY 5585.—“An Oklahoma Dirt Eater.” A. C. A., Oklahoma, is treating a twelve-year-old boy who eats dirt. He cannot find any mention of the disease in his books and asks what should be done for him. †

The first essential is to eliminate thoroughly, to cut off the supply of “dirt,” and order plenty of nutritious foods. Before meals prescribe juglandin, 1-3 grain; hydrastin, 1-6 grain; strychnine arsenate, 1-134 grain (you may occasionally substitute for the latter nux vomica and capsicum); an hour after meals give pancreo-papayotin and 1 or 2 grains of calcium sulphocarbolate. Every second or third night order a hepatic stimulant, followed next morning by a laxative saline draught. Nuclein is indicated, and it may be given subcutaneously, absorbed from the buccal mucosa, or taken internally. Keep the skin active with frequent salt sponge-baths. A few initial doses of castor oil are desirable.

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 QUERY 5586.—“Obstinate Enuresis.” L. W. C., Oklahoma, desires treatment for a twelve-year old boy who has been annoyed all his life with incontinence of urine. He is well developed, in every way rather large for his age, and full of life and vigor. All the common “bed-wetting” remedies have been tried, but with only temporary relief.

Before we can prescribe satisfactorily we must have a clear idea of the cause of the incontinence. It is essential that we first examine the patient and the urine. Indigestion, worms, spinal disease, stricture, fissure or fistula in ano, retention of fecal masses, or any one of many other abnormal conditions may cause enuresis. Adenoids, debility, adherent prepuce, undescended testicle, and hernia, each and all may cause persistent bed-wetting. On the other hand,

lithemia, diabetes, cystitis, or hyperacidity of urine may be the direct cause of enuresis, and all treatment would fail that did not take such causative condition into account. Enuresis diurna may even be due to eye-strain, the fitting of a proper pair of glasses putting a prompt end to the undesired flow. Also masturbation is a frequent cause of this trouble in both sexes. If none of these abnormalities can be discovered, we must look upon the disorder as a functional anomaly and try to improve the tone of the nervous system. That very simple medication suffices in these cases has been proved many hundred times.

It is essential, as you will note, to correct any abnormality, keep the bowels open, feed the child properly, and instruct it to attend to the bowel regularly. Water should be forbidden after six p. m. When the parents retire, the child should be aroused and urine voided.

Brucine and ergotin may be given half an hour before meals. Occasionally thuja may be added with advantage. Atropine valerianate may be given every four hours. Be sure that you have no ocular, gastric or rectal disorder. Exclude with particular care seat-worms or lumbricoides; also examine for a very long or tight prepuce. In addition we suggest that you read the chapter on Enuresis Nocturna in “Every-Day Diseases of Children.”

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 QUERY 5587.—“Oxaluria.” J. P. B., Massachusetts, forwards a specimen of urine for examination, marked C. J. M., with the following clinical data:

The patient for a year has had severe attacks of pain and vomiting resembling that of duodenal ulcer, and had been subjected, by one of Boston's best surgeons, to an exploratory operation, at which a chronic appendicitis was discovered. Has experienced no trouble for about two months, but now has pain directly over the pubes, low down in the center, associated with rumbling of gas, this pain often growing severe; sometimes vomiting occurs. The bowels move four or five times daily, stools being, apparently, normal though rather watery. He

has to arise eight or nine times at night to urinate, there being pain in passing water, but none afterward. The stream sometimes stops suddenly; no other symptoms of gravel.

Unfortunately you forgot to indicate the amount of urine passed in twenty-four hours, so we are unable to estimate the total solids. There is an enormous amount of calcium oxalate, some pus, much mucin, a trace of indican, and marked hyperacidity. As you are well aware, the excretion of large quantities of oxalates bespeaks marked metabolic disturbances.

The first essential is to eliminate and restore functional activity. Giving diluted nitrohydrochloric acid (10 minims in plenty of water with each meal), and strychnine, juglandin and boldine before meals, would prove beneficial. Order papayotin with charcoal after food, and for a week a teaspoonful of sodium bicarbonate and xanthoxylin one hour before eating, the powder to be taken dry on the tongue, followed by a glass of water.

The diet should consist of fruit, cereals, a very little meat, eggs, coffee or tea with plenty of cream, buttermilk (if it is fresh and good), and whole-wheat bread. Outdoor exercise is essential. Two or three nights a week give three or four doses of calomel, iridin and podophyllin at hourly intervals. Sponge-baths two or three times a week; warm saline enemata on retiring.

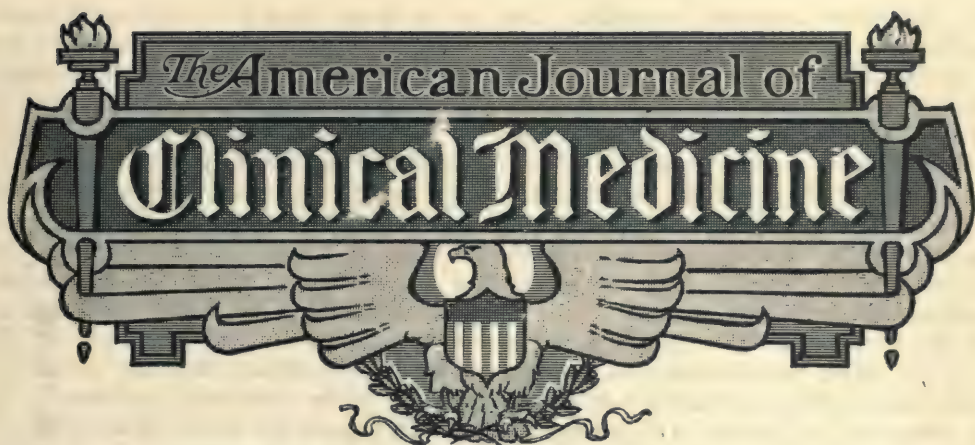
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 QUERY 5588.—“Venereal Warts.” M. F. S., Iowa, asks: “What is your treatment for venereal warts?”

A preparation containing salicylic acid, resorcin and calomel is very widely used and is efficacious in most cases. The proportions are salicylic acid, one dram; resorcin, thirty grains; calomel, two drams. This preparation is applied after cleaning the warts thoroughly with an antiseptic solution. If the growths are at all discrete, and small, seize in a pair of rat-tooth forceps and snip off with scissors, including in the cut a small portion of the tissues at the base. Before clipping off inject under the base a drop of a one-percent solution of eucaine or other

anesthetic. Touch the bleeding points with pure carbolic acid and dust with iodoform. If the warts present a large base, shave off level with a sharp, flat knife, curet the wound, then cauterize with carbolic or nitric acid and dress with calomel and zinc oxide, equal parts. Operate under general anesthesia. Oozing should be controlled by the application of compresses soaked in adrenalin-chloride solution. If the patient will not submit to operation protect the normal skin with vaseline, apply nitric acid to the warts, rub in well, dress with borated vaseline. Repeat the process every second day. Chromic acid in 10 percent solution may be brushed over the warts once daily. Thuja is, in our estimation, one of the best applications under ordinary circumstances. Keep the warts saturated with Lloyd's preparation of thuja occidentalis.

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 QUERY 5589.—“Practical Diagnosis: Vasectomy.” A. J. L., Kearney, Nebraska, wants to know where he can get a book on “practical diagnosis,” one that does not go into unnecessary detail, also information in regard to vasectomy?

The doctor will find a very interesting article on “Vasectomy” in *The Medical World* for February. There is no question as to the efficacy of the procedure. See answer to Query No. 5543, February number of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*. You will find Musser's “Medical Diagnosis” published by Lea and Febiger, Philadelphia, one of the most complete and authoritative works available. Boston's “Clinical Diagnosis,” published by W. B. Saunders, is a somewhat similar work, but the contents are eminently practical and it makes an excellent reference book for the busy practitioner. Hare's “Practical Diagnosis” published by Leo and Wilson's “Medical Diagnosis” by Lippincott are also well worth possessing. Were we making a selection for our personal use we would choose Wilson's “Medical Diagnosis” and Boston's “Clinical Diagnosis.” You cannot go astray, however, Doctor, if you purchase any one of the four volumes which we have named.



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The Treatment of Pulmonary Tuberculosis

A HISTORY of the treatment of pulmonary tuberculosis, or clinically, of consumption, would afford an interesting study of human endeavor and would often prove both amusing and distressing. If it could be truthfully said that whatever can make us ill has been brought forward as a cause of consumption, we might with equal truth assert that whatever can make us well has been praised as a cure for consumption.

From ancient Hindu times, when the Ayur Veda of Susruta gave minute dietetic, hygienic and therapeutic instructions for the care and treatment of consumptives, to the present day, with its outdoor sleeping, its stuffing, its rattlesnake venom and its tuberculins (in the widest possible acceptance of the term) there is a far cry, and many are the methods, innumerable the remedies which have been proposed, lauded, condemned and forgotten. Through them all there runs a red thread, fine and delicate after its very first appearance in ancient Hindu lore; almost, and often quite, lost sight of throughout the middle ages, but becoming stronger since the middle of the last century and now recognized as of paramount importance; and that is the important fact that we must treat consumptives

more than consumption. While Susruta gave detailed and careful directions for the general and more particularly the dietetic management of phthisical patients, Hippocrates had already described a multiplicity of remedies simply as being "good for consumption," and the writers of the middle ages employed a terrifying pharmacopeia which after all was of little more than symptomatic use.

Although the importance of outdoor life had been emphasized occasionally (in our country especially by Benjamin Rush), it was only with Bodington in England, and still more with Hermann Brehmer in Germany that not only the beneficial effect of open-air life was demonstrated, but that efforts were being directed particularly to the improvement of the nutrition and of the general condition of consumptive patients. Dr. Brehmer, in spite of all ridicule and opposition, demonstrated the soundness of his claims and the sanatorium movement may be said to have originated from his efforts.

The discoveries and attainments of the bacteriological era which commenced with Pasteur and Koch did not change as much as they explained and confirmed the value

of Brehmer's mode of treatment. The purpose of all therapy in tuberculosis was found to be the improvement of the patient's nutrition, and therewith of his power to resist the pathogenic action of the tubercle bacillus and its toxins, as well as of concomitant mixed infections and intoxications. Even the specific treatment, however great its value and importance undoubtedly is, can at best produce or increase the specific resistance, and this cannot be of much use if the nutrition of the patient is feeble. For this reason the administration of tuberculin and of kindred remedies is very properly postponed in patients with progressive debility until this may have been at least arrested and the nutrition improved.

As we have indicated, of the remedies and methods lauded for the symptomatic treatment of consumption there is no end; but while it is proper and necessary to relieve the symptoms of the disease as they arise, we must not forget and neglect the underlying condition. Our treatment of consumptives will be the more successful the more we can improve their nutrition and general resistance, for it is these that furnish the substances which produce a specific resistance or an immunity.

"Poverty," says Hunter, "is an incentive to push." And push opens all doors.

HAVE A PUBLICITY COMMITTEE

I have long felt that the medical profession should show more interest in and activity concerning the welfare of the community, looking at it from a medical standpoint. Here is work for our local medical societies. There should be a publicity committee in every one, whose duty it should be to tell the people through the local press and by occasional open lectures or series of lectures of a popular character, something about medical progress, and what the profession and its scientific workers are trying to do and really accomplishing for the public good.

Isn't it better for us doctors to do this work ourselves than to leave it for laymen

to try to do, often in a half-hearted, sensational or inaccurate way, through the lay magazines and fad publications of all kinds? Not only can we throw light on the essentials of hygiene and sanitation, tell how diseases are spread and how they may be prevented, and what the individual may do and should do to keep well; but we can also explain the fallacies of the faddist and charlatan, tell of the methods of quacks and lead people to a knowledge of the dangers and delusions of the patent-medicine evil. And in so doing we may protect ourselves, add to our strength in the community, and what is of greatest importance, make ourselves of the greatest value to humanity.

"No man liveth to himself alone." The medical man should realize this as much as any man—more than most. His duty does not begin and end with the healing of the sick and the "banking" of the profits therefrom. The law of life is the law of service. A doctor is a teacher. Isn't it time to begin to begin to teach, utilizing for this purpose the really magnificent organizations which are already at our hand, and awaiting utilization?

SHALL WE SURRENDER?

Dr. Watson's letter, in another department, voices the views of a vast number of physicians. It places before the profession a condition that must be realized and a question that must be settled.

Many a physician is thoroughly disgusted with drug medication. So is the public. So are the upper elements of the medical profession—and about five-tenths are comprised in the "upper elements."

It is not necessary to expatiate. Stripped of their mystery, viewed in the light of modern science, judged by the standards of modern times, based on utility proved and comprehended, the old drugs are trash. What need of calling the long roll of their imperfections: uncertain, variable, decomposable, often inert and that just when most needed, vile to the taste and loathsome to the stomach—truly it is less marvelous that we have flung them overboard than that we put up with them so long. The memory of

the times when we saw the lives entrusted to us go out, when these broken reeds gave way, is one we would fain blot out if we but could. The patients who left us because, face to face with their ailments, we were unable to do ought but "try things," is still exasperating, though it is now ancient history.

And yet it is all our own fault. The thing is so simple! Drugs contain principles that exert some influence over the functions of the human body. We have lacked the ability to utilize them properly; and child-like, we abuse the drugs instead of acknowledging our own ineptness. The active principles of drugs are not in themselves variable, uncertain or doubtful; each of them exerts invariably the same effect in the same doses. The trouble lies in the use of crude preparations, containing these active principles in variable and uncertain percentages and proportions. When extracted from the mother-plant and presented singly in chemical purity we have an arsenal of perfect weapons at our hands, and all that is needed is the knowledge and skill to apply them—the *scientia et ars medendi*.

These active principles have been thus prepared; they have been studied by administration to animals, to healthy men and to sick men. Their action has been worked out with all the precision of modern science. The deductions from these studies have been submitted to clinical tests and corrected by that final proof. Nothing is left to chance, to psychic influence, to the mysterious unknown. So many of these admirable tools have been proved that active-principle therapeutics has grown to be a method, and would have developed into a school had its sponsors been less ethical. It has developed strictly within the lines of the profession. It is our own child, our own flesh and blood; and yet we treat it like a step-child.

What children we are! The touch of mystery attracts us, as does the foreign. We jump at an idea or a drug imported from Germany, when the same thing produced at home would not interest us, beyond a sense of jealousy that makes us resent our neighbor's propositions as naturally as we wel-

come the foreigner's. The active-principle movement being perfectly legitimate, a natural advance made by ourselves, based on work done by the medical profession in natural course of development, is too matter-of-fact for us, and we look outside.

Innumerable men who are sublimely ignorant of medicine, or of the human body, who know too little to distinguish the backbone from the esophagus, from the depths of their ignorance propose new methods of treatment. They make claims which similarly ignorant people accept as true and their methods acquire popularity. And we—accept them! We are ready to accept anything that will catch the public. So we allow the impression to become fixed that all the advances in therapeutics come from the outsiders, the quacks, and that the regular medical profession is incapable of developing anything for itself, but must be driven into unwillingly adopting the methods devised outside its ranks. But by the time we get ready to take up one of these the novelty is gone, the public is getting tired of it, the quack has reaped his harvest and is off on the trail of something else. Meanwhile we have accumulated a varied assortment of highly expensive—junk.

Now, as ever, we find ourselves facing the question, shall we desert to the enemy? Shall we give up all the results of good, honest work done by the medical profession during its long existence, and acknowledge its worthlessness, giving quackery our endorsement again?

Why should we, when we have this magnificent development of the resources we have been studying so long? The case is simple—there exist in plants and animals many remedial agents, principles each of which exerts an influence over one or other of the vital functions of the human body. These functions are deranged by disease, being either lowered or elevated. By applying these active principles to exactly counteract the influence of disease, we raise the depressed functions and lower the excited ones, until we restore that physiologic harmony we know as health. This we can do by the use of our drugs, with a precision not

to be obtained from any other therapeutic resource—quickly, surely, agreeably, and inexpensively; with the least possible interference with the patient's physical economy.

No, I am not ready to surrender. Take you your quackery and I'll take my active principles; and in nine cases out of ten I will beat you.

My message in its fashion shall be an appeal to enthusiasm in things in life, a call to do things because we love them, to love things because we do them, to keep the eyes open, the heart warm and the pulse swift, as we move across the field of life.—David Starr Jordan.

ON THE DANGER OF TUBERCULOUS INFECTION FROM CONSUMPTIVES

Physicians who come in daily contact with tuberculous patients, are all too often told of petty persecutions which these patients have to undergo on account of their disease. Health boards, societies and individuals wishing to establish sanatoria for the treatment of tuberculous diseases are greatly handicapped in their endeavors by the fear of people living in the neighborhood of the selected locations, lest the consumptive patients who are to congregate in the planned institutions, should scatter the dreaded infection broadcast and render the entire neighborhood tuberculous.

A little sober reflection should suffice to show the absurdity of this excessive fear of contagion, especially if we consider that we expose ourselves fearlessly, perhaps because often we do so unknowingly, to a far more dangerous infection by much worse diseases by daily contact with persons whom we do not know, in crowds, in stores, in street cars.

Again, it is a matter of common observation that after an attack of scarlet-fever, of diphtheria, of measles or whooping-cough in a house, this is only disinfected because of the stringent regulations of the Board of Health, and that we are not afraid of associating with persons afflicted with such diseases, perhaps with the exception of scarlet fever and diphtheria, although all

these diseases are as a matter of fact far more contagious than is tuberculosis.

Whence arises this strange and unreasoning fear? It is peculiar especially to the laity. Physicians are not often fearful of contagion for themselves. Still it may be proper to discuss the matter in this place, if only to call the attention of the readers of *CLINICAL MEDICINE* to the best way of contradicting and controverting the error.

The idea that consumption may be transmitted from person to person is old, and has been handed down from antiquity. Until the latter half of the last century it had always been more or less successfully denied and the transmission of the disease by heredity was most forcibly insisted upon.

In the sixties of the last century, when Villemin demonstrated to the French Academy of Medicine the infectious nature of tuberculosis, his conclusions became subjected to the most violent and heated contradiction. But in 1882, when Prof. Koch announced in the tubercle bacillus the ultimate cause of tuberculosis, he left nothing to be explained or to be contradicted. His demonstration was complete and finished, and his announcement could only be accepted as a fact. This fact, that the disease leading to phthisis was due to the introduction into the body of a microorganism, and that the source of this microorganism lay in those afflicted with the disease, in whom it lived and multiplied and by whom it was discharged into the open air, led as a matter of course to manifold attempts to prevent such transmission. The science of the prevention of disease, hitherto barely more than empirical, became a science indeed and may be said to have commenced, like bacteriology, with Pasteur's and Koch's discoveries.

It goes without saying that the consequence was soon drawn: If consumptives scatter tubercle bacilli, and if tubercle bacilli produce tuberculosis, the thing to do is to avoid coming in contact with tubercle bacilli; in short to avoid consumptives. More: The struggle against tuberculosis, which soon was to assume a world-wide scope, and in which physicians, business

men, clergymen, social workers and intelligent laymen, all alike took part was of course directed against the deadly tubercle bacillus. Hence the leaflets and pamphlets which were, and still are, distributed broadcast. But, unfortunately, in many, very many instances, the struggle against tuberculosis degenerated into a struggle against the tuberculous, and thus much harm was done and many innocent patients were wronged.

Now, the struggle against tuberculosis is all right and proper, but we must not, to use the expressive German saying, "throw out the child with the bath water." Fighting against the further dissemination of tuberculous infection we must not harass and handicap the victims of the disease, they are sufficiently distressed as it is. We should above all teach our apprehensive clients, as well as their fussy sisters and cousins and aunts, that a consumptive who is clean in his person and careful in the disposal of his discharges is in no manner a danger to his surroundings. Teach your patients not to breathe, or talk, or cough into people's faces, not to kiss ANYBODY on the lips, to hold bits of muslin or of tissue paper which can be burned before the mouth and to use them as receptacles for the expectoration. Teach them never to spit on the floor, on the sidewalk, or anywhere where people congregate, and they will not transmit infection to others.

We may also impress our apprehensive clients with the fact that a simple contact with consumptives does not suffice to produce an infection. If it did, the world would have been depopulated ages ago. Long and intimate contact with and repeated inhalation of virulent tubercle bacilli are necessary, and even then the subject of such exposure may escape because his individual resistance is sufficient to render the infection inert, to make it latent. Infection without subsequent disease occurs in the majority of persons reaching puberty, while only about twelve percent of all living die of consumption.

Of course the careless consumptive we must teach and watch, and if he be unteachable we may and must shun him; but the

clean, careful consumptive is not a source of danger and need not be avoided.

Don't flinch, flounder, fall over, nor fiddle, but grapple like a man. A man who wills it can go anywhere, and do what he determines to do.—John Todd.

THE TONSILLAR ORIGIN OF SO-CALLED RHEUMATIC AFFECTIONS, INCLUDING TUBERCULOUS RHEUMATISM

Dr. Paul Schichhold (*Muench. Med. Woch.*, 1910, Feb. 8, p. 281) refers to the fact that as early as 1894 the German imperial report on military sanitation had raised the question as to whether there is in many instances a direct causal connection between tonsillitis and articular rheumatism. This idea was not followed up until in 1904 and 1905 Dr. Guerich published several communications in which he showed that tonsillitis does not form the beginning or primary lesion of articular rheumatism, but that the latter affection is produced through pus from tonsillar lesions entering the circulation. As to this, however, it was later claimed by Chvostek and Singer that it is not the pus-bacteria themselves but their toxins that give rise to these symptoms. In support of his contention Guerich not only demonstrated pus in the tonsils of rheumatics, but he succeeded in permanently curing ninety-eight out of one hundred and twenty-five cases by the tonsillar treatment which he had formulated upon the basis of his findings.

Schichhold himself has treated some seventy cases after Guerich's method. He has found pus in the tonsils in the great majority of his cases of articular rheumatism, although sometimes only after careful quest. In order to locate the pus-pockets, the anterior pillars of the fauces must be fully drawn back and the tonsils searched in all directions with a hollow probe. Schichhold found as much as one and two cubic centimeters of pus in tonsils which had never caused any symptoms whatever.

The causal treatment of articular rheumatism, consequently, is evident and consists in removing as completely as possible the diseased tonsil. In place of enucleation,

which is a difficult operation and not without danger, the author prefers the successive ablation of portions of the gland, if necessary in two or three sittings, after the pus-pockets have been slit open, and the pus has been evacuated. Tonsillotomy is insufficient because it removes only a portion of the tonsil and is very apt to leave large pus-sacs in the remaining basillar portion.

The acute symptoms diminish almost immediately, and the patients steadily improve, except for a slight "reaction" on the second or third day, which, however, lasts only a day or two. Schichhold has seen not only acute cases of acute articular rheumatism healed promptly and permanently by removal of the tonsil, but he has also seen recent cardiac complications disappear. He concludes from the results of his investigations:

1. The cause of so-called rheumatic diseases lies in the pus which fills the tonsillar crypts and which may enter the circulation and produce specific symptoms. Aside from the tonsils other organs may become the origin of such diseases if they are the seat of pus collections.

2. A complete cure, and especially the prevention of relapses, is possible only by the completest removal of the tonsils. All measures which result only in partial removal, especially tonsillotomy, are entirely useless for securing permanent relief.

3. Aside from the joint affections, complications are also influenced favorably; cardiac complications, however, are only thus affected if of recent origin.

4. Tonsillar treatment appears to have a favorable influence upon other diseases in which enlarged tonsils are found, especially on kidney diseases.

These experiences of Guerich and Schichhold, it occurs to us, possibly may afford the proof of the theory which Prof. A. Poncet has advanced so persistently for more than a dozen years, to the effect that there exists a tuberculous form of articular rheumatism.

It has long been asserted by Ribbert, Aufrecht and others, that the tonsils are the first localization of tuberculous infection and that from here it is carried into the body.

It has been shown that tubercle bacilli may be arrested in the crypts and in the tissue of the tonsils, where they find favorable conditions for growth and consequently for the formation of toxins. It has also been shown, for example by Baumgarten, that the tubercle bacilli themselves are capable of causing suppuration. Nothing, therefore, seems simpler than to assume that tuberculous toxins are carried from the tonsils into the circulation and that they cause tuberculous arthritis in like manner as other forms of acute arthritis are produced by other toxins.

We shall be interested, indeed, to learn whether Dr. Poncet will accept these findings as a support of his theory, for which he has so far been able to afford only clinical proof.

No one can acquire a fortune unless he makes a start; and the habit of thrift, which he learns in saving his first hundred dollars, is of inestimable value later on. It is not the money, but the habit which counts.—

—Darius Ogden Mills.

DIGITALIS AND DIGITALIN

Here is a fact that not everyone knows, but which is of considerable interest to every physician who uses digitalis in some form—and who does not? There is a shortage in the crop of the English leaves of digitalis; as a matter of fact it has been found practically impossible, for some time, to secure any of this drug of good quality. There is, to be sure, an abundance of digitalis on the market; but the American-raised leaves are of little therapeutic value and the German drug is not much better. As a result of this shortage, it has been exceedingly difficult and it is now almost impossible to secure digitalin, and other digitalis principles. The sources of supply, American and foreign, have been raked and scraped from one end to the other, but the digitalis (the good kind) and its active principles are not to be had.

Have you heard of this before? Have your prescriptions for the tincture or infusion of digitalis been held up? We have not heard of any physician being put to inconvenience on this account. Then what are

the doctors' patients getting? The natural conclusion is, that in the absence of an adequate supply of the English leaves the market is being supplied with the American or German "hay"—since from the standpoint of activity, "drug" it can hardly be called. The new English crop will soon be here—probably sometime in July; but till then the patients of careless physicians who prescribe their remedies through careless pharmacies, are likely to suffer.

Digitalin is not sophisticated, though it may vary in quality. Get it if you can, of someone who has provided for the future—though even these may run short—but meanwhile learn the adaptabilities of other drugs of similar action. Now is a good time to study sparteine sulphate, adonidin, strophanthin, convallamarin, and other excellent heart tonics, which too often we pass by without even considering, simply because digitalin has become the almost universal panacea for heart disease.

DIPHTHERIA AND TUBERCULOSIS

In one of the recent *Bulletins* of the Chicago Department of Health there is an instructive map showing the distribution of diphtheria. Of this disease 917 cases were reported in one month. The map shows that these are gathered around certain foci, the worst being in the bend of the river above the beginning of the drainage canal. South of the stockyards another considerable group is recorded, beside which there is a sprinkling of the disease in single outbreaks and groups over every ward in the city. The sad part of it is that this disease is preventable and could be stamped out of existence by proper hygienic measures.

Diphtheria is a disease of houses. It clings to those where the hygienic conditions are especially bad, and no precautions will avail to prevent it in such localities. It demands that the premises must be put in absolutely hygienic condition, and if this were done the disease would soon become extinct.

In the *Bulletin* of the St. Louis Tuberculosis Commission a few months ago there

was a suggestive scheme showing the proportion of deaths due to each of the principal causes of mortality. Out of all the deaths in that city over 11 percent are due to tuberculosis, a little less than 10 percent to pneumonia; heart disease, violence, bowel trouble and kidney diseases coming next in the order named.

It is sad to note how many deaths are due to preventable causes, tuberculosis ranking first among these. Truly, when one sees such evidences of the universal ignorance and neglect of hygiene, it is difficult to account for physicians being idle. If each of us understood our obligations in the way of inculcating proper hygiene among the community in which we live, there would be little of idle time on our hands.

Gaze thou in the face of thy brother, in those eyes where plays the lambent fire of kindness, or in those where rages the lurid conflagration of anger; feel how thy own so quiet soul is straightway involuntarily kindled with the like, and ye blaze and reverberate on each other, till it is all one limitless, confluent flame (of embracing love, or of deadly, grasping hate); and then say what miraculous virtue goes out of man into man.—Carlyle.

ETHICS AND THE ACTIVE PRINCIPLES

Once in a while we receive a letter from our friends stating that his advocacy of the active principles and the methods based thereon seems to arouse a certain degree of suspicion on the part of his professional brethren, who appear inclined to stand aloof from him on account of his advocacy of these remedies. This is a matter which appears to us so important that we deem it wise to devote some space to its consideration.

There is little wonder that the profession at large should assume this attitude. The inroads made upon the profession by the many sects, fads and delusions that have arisen are calculated to make any of us suspicious of new matters. It is true that only ignorance could explain any such attitude toward the active principles, but we must not forget that ignorance is the greatest foe to the progress of humanity and to the profession at large. Ignorance is the enemy against which we must fight.

We are championing a reform which works a revolution in applied therapeutics, nothing less. It is perfectly natural that this should be met with suspicion and distrust, until one has had time to examine into its merits; and to many, unfortunately, this time never seems to come. Each and every one of us is circumscribed in his mental attainments and qualifications. Every one of us is inclined to systematize his knowledge, and as this is done to crystallize it, the result is that we get into certain ways and methods of thinking and acting, and in these we remain. This eases our work considerably, just as it eases our study of therapeutics to have a systematic classification of the remedies which enables us to study them in groups.

After one has formed a system of this sort, he rather unwillingly modifies it by the introduction of new material knowledge. The new knowledge may assimilate easily, however, and if so, he admits it. But if this new matter is of a sort to disrupt completely the old system, and necessitates its rebuilding, the man unconsciously shrinks from undertaking such a task and prefers to go on in the way to which he is accustomed, using the methods and means with which he has become familiar, and with which he is doing work to his comparative satisfaction.

While this applies to a certain proportion of the profession, it does not apply to all, by any means. We have one very large group of supporters drawn from the elderly members of the profession, men who have used the old *materia medica* until they are thoroughly disgusted with its inefficacy and are ready to throw it overboard. Some among these refuse to believe that there is anything else, their disgust with therapeutics in general being absolute; but others appear to be willing to give a trial to the new methods, and when they do, their enthusiasm is something touching to behold.

A textbook which should be studied by every man who feels it incumbent upon himself to advocate a great reform is "Darwin's Life and Letters." The methods employed by the great iconoclast and philosopher are

those which are necessary for success in any like enterprise. Darwin took up the men who wrote in opposition to his theory. He studied the man, ascertaining what he had done that was along his line of research, and got into communication with him, speaking in pleasant terms of subjects which both had studied in common. He delicately called attention to the point up to which the other man's ideas and work harmonized with his own, and expressed the hope that further study along that line might result in still further agreement. Usually the other men realized for the first time that he had been traveling along the same road with Darwin, and the result was generally that he found he could go still farther, and before long he had ranged himself as a supporter of the Darwinian doctrines. The book is a model in this respect.

In our intercourse with other physicians we should be governed by a kindly, considerate spirit, with even-handed justice, tempered with mercy, and with the desire to cover up our neighbor's wrongs rather than tear away the veil and expose them to the public. This should be our rule. It may be acquired by practice. I do not believe it is natural to one of us; it certainly is not to me. But I have learned much by stopping in every case to ask myself what would have been my own course had I been exposed to like temptations and like circumstances as my erring brother; and the result has been that in every instance I have found sufficient reason to justify me in treating his derelictions as I should like to have had him treat mine. This does not mean in any degree a smooth compliance in a wrong diagnosis, or aiding in deception or wrong-doing. That would be going too far.

But it is very rarely necessary for us to do such a thing. Suppose we are called in consultation and we find that our brother is "dead wrong." Very well; we retire to another room for our consultation, and see that there is no possibility of being overheard. Then we lay our case squarely before him, and we must necessarily come to an agreement. When this is done, our next

duty is to protect the reputation of our colleague and to allow no word, or hint, or intimation, to escape us in the presence of the family that could work to his detriment. We rarely have to counsel the change or the omission of his treatment. If we do, we can easily put it upon the ground that it has already accomplished all the benefit of which it is capable, and that we may make it the basis for a further extension of the treatment. As a matter of course people expect a consultation to be followed by some additional treatment; that is what they think they are paying the consultant for, and this is but natural. Its addition to the former treatment saves the reputation of our colleague, who would suffer if the new treatment were substituted entirely for the former.

It may be that there are some men so constituted that they could continue to speak evil of us if we consistently and uniformly speak well of them. It has not happened in my own life that I have had to meet one such man. Unfortunately many physicians feel that they are in self-defense bound to lose no opportunity of speaking detractingly of their competitors; and when a new physician settles in a town all of the old ones are apt to combine in this manner against him. Nevertheless, the quiet, even-handed, courteous way of proceeding must have its effect.

One must be ethical, one must respect the prejudices and customs of the community in which he settles. To do otherwise would show one to be so lacking in tact that his failure is a matter inherent in his mental constitution.

Everybody who is successful advertises. One must do so, and there is nothing inherently wrong in advertising; but it must be done strictly within the ethical limits. It is absurd for a man, had he the qualifications of a Senn, to expect that the community will realize this by intuition, without having evidence placed before them showing this to be the case. But that does not mean that you are to place a column advertisement in the local paper with your picture at the top. Advertise, but you

must and should do so in a strictly ethical manner.

Don't be afraid to be on the "other side." No man with a mind can help disagreeing with other people once in a while.

THE ILLINOIS STATE BOARD OF HEALTH

In our April number we referred to a "war of words" between Dr. Carl E. Black, chairman of the Judicial Council of the Illinois State Medical Society, and Dr. James A. Egan, secretary of the Illinois State Board of Health, relative to the alleged "slackness" of the Illinois Board in passing candidates for licensure in this state, and the charge made by Dr. Black that Illinois is "one of the rotten spots in the United States in medical education." Since this was published the war has gone merrily on in the February, March and April numbers of *The Illinois State Medical Journal*, Dr. George W. Webster, president of the Board, and the editor of the *Journal*, each taking a hand, in addition to the previous combatants.

We need not enter into the details of the fight, which presumably is of little interest to non-residents of Illinois, and which has to do largely with the fixing of the responsibility for the alleged lack of adequate medical-practice legislation in this state. Frankly, our sympathies are with the Board, the whole controversy looking to us like an effort to find a scapegoat for the derelictions of the medical body, which might perhaps be found nearer home. We agree with Dr. Egan that "the ideal and Utopian in medical education are attractive, and seem readily available to those who are not conversant with the state laws; but it will be found that the very laws which authorize supervision of such matters also exact moderation in their enforcement."

There is too much of a tendency to seek panaceas for all our professional troubles by "getting the law on somebody"—even to the extent of killing off at one fell swoop nine out of the twelve medical colleges in Chicago, because somebody has found that

only three (the balance being small, young or poor) are not "acceptable." And yet there is ample evidence to show that *most* of the "unacceptable" nine are doing excellent work, and that their records in state-board examinations will compare very favorably with some of their more wealthy brethren. Our sympathies, somehow, go out to the smaller schools.

That Illinois is not a "plague spot" in medical licensure is shown by a comparison of the results in this and other large states. Thus, in 1908, Illinois rejected a larger proportion of candidates than New York, Pennsylvania, Ohio, Michigan, Wisconsin, or Indiana. Iowa rejected more than Illinois. In the same group of states only Wisconsin, Indiana and Iowa rejected more of their home graduates.

To a spectator it looks as though the war had gone far enough. Instead of finding fault with our state officials we should be glad to see our society and its organ lending them the encouragement and support which alone are needed to increase the measure of their efficiency.

The worst sin against our fellow creatures is not to hate them, but to be indifferent to them; that's the essence of inhumanity.—Bernard Shaw.

PURE-FOOD REFORM

The trouble with reformers is that when reform gets to be a habit, the reformer never knows where to stop. There is no intoxicant which equals, in heady properties, public commendation. It is the wine which is certain to go to the head of any but the strongest and most equable of individuals, and such persons are not usually prominent as radicals.

With most of the judgments rendered under the pure-food law we are heartily in accord. When "Gowan's pneumonia cure" is condemned for false and misleading statements, such as that "it is entirely different from any other remedy, containing new principles never before applied, consequently it cannot be substituted;" when it says, "it supplies an easily absorbed food for the lungs and effects a quick, permanent cure,"

and when it omits to mention the quantity of opium contained in it or prints it in such a manner as not to be readily noted by the purchasers, we fully concur in the condemnation.

So, also, as to the proscription of "eye-line," which we do not believe "has the property of repairing and rejuvenating the eye and the sight," since perfumed vaseline cannot well possess such remarkable properties. We also share in the governmental doubts that "bromo-febrin is a sure cure for headache and neuralgia," or that "it is absolutely safe," since it contains about 50 percent more acetanilid than the label calls for.

When "Dr. Rupert Wells" advertised his "radol," as "a radium-impregnated fluid," and the contents of the bottle proved to be not radium-impregnated, but without radio-activity, it certainly looks as if the department were not far wrong in pronouncing it false and fictitious.

Still further, we heartily concur in the condemnation of the practice of labeling canned peaches and apricots as containing two and one-half pounds per can, when the gross weight is only thirty-four ounces, as being calculated to confuse the average mind in regard to the principles of arithmetic.

When the parties who make "damiana gin" forget to add that strychnine, brucine and salicylic acid are ingredients of the rejuvenator, we feel that people who thus imperil the lives of possible customers deserve a worse condemnation than the confiscation of their goods.

Still further—is colocyath technically and really adulterated if the pulp and seed are ground up together to form the powder? Since the activity of the plant is confined to the pulp and the Pharmacopeia directs that it alone should be employed, this may be looked upon as an actual adulteration, although the label is literally true in designating the contents as powdered colocyath.

But the next case seems somewhat difficult. Mapleine is condemned, as, in the opinion of the government expert, the ordinary, everyday customer is liable to believe

from the label that it is prepared from maple, whereas this is not the case. The label does not say that it is derived from the maple, and it is acknowledged that the preparation is a harmless substance calculated to give a maple flavor to syrups. Here we feel as if the law had been somewhat stretched, as mapleine is exactly what the label says it is, and nothing more is claimed for it than is actually true.

In still another instance the exceeding care of the government experts is shown. In Louisiana chicory is commonly employed as an ingredient of the beverage, coffee, not as an adulterant or a substitute, but because the people like the chicory flavor. Experts in coffee making will state what proportion of chicory they add to give the exact flavor thought most desirable. A New Orleans concern puts out a blend upon the cases of which is the correct label, "Louzianne roasted coffee and chicory," but the individual cans in the cases are labeled as simply "Louzianne coffee," and the omission of the word chicory from the can-label has occasioned the condemnation. It is probable that no fraud was intended, since in New Orleans, where this coffee is prepared, chicory is employed as a matter of course. But when exported to other parts of the country where chicory is not so used it would be looked upon as probably an adulteration. Chicory is quite harmless, and as it is said to cost more than coffee, the blend is not made as a cheaper adulterant.

Here, therefore, a nice-question comes in. Chicory is employed to impart a peculiar flavor to the coffee, which is distinctive of this brand, just as a peculiarly delicious flavor is imparted to beefsteak by rubbing a piece of asafetida on the gridiron.

Under these circumstances, is the cook compelled to disclose the secret of his culinary skill to the world at large, and to his competitors? Should the manufacturers of "Louzianne coffee" be compelled to tell all who read the labels to what the distinctive flavor of the product is due? The addition of chicory does not necessarily cheapen the product or impart any unwholesome qualities to it. Altogether it

seems as if in this instance the law had been somewhat strained in its application.

It is easy in the world to live after the world's opinion; it is easy in solitude to live after our own; but the great man is he who, in the midst of the crowd, keeps with perfect sweetness the independence of solitude.

—Ralph Waldo Emerson.

NUCLEIN IN TUBERCULOSIS

In *The Medical Record* for March 26 Dr. E. P. Ward of St. Louis presents a paper detailing his treatment of tuberculosis by the intravenous injection of nuclein. Prof. Ward begins his study with the lesions which occasion a growing diminution of oxidation. The increasing impairment of the digestive system renders the absorption of remedies given by the stomach more difficult; hence, to get the full benefit he resorted to injections into the circulation.

Studying his cases of tuberculosis, Prof. Ward finds in every one of them a decrease in the specific gravity of the blood and a corresponding lessening of the amount of hemoglobin and the number of red corpuscles. To estimate the specific gravity of the blood he employed Hammerschlag's modification of the Roy method. Besides the deficiency accompanying the diminution of the red blood-cells there is a very large increase of poikilocytes. The erythrocytes are very much deformed.

These changes occur in proportion to the severity of the disease. The specific gravity of normal blood is 1.058. If it falls to 1.045, the percentage of hemoglobin will have dropped to 50, and 20 percent of the red blood-cells will have become poikilocytes. As a consequence we have proportional deficiency in the oxygen-carrying powers of the blood.

Dr. Ward finds that under the influence of the nuclein solution the poikilocytes rapidly disappear from the circulation, the hemoglobin is eliminated by the liver as bilirubin and biliverdin, the deformed cells are replaced by new and healthy erythrocytes from the normoblasts, more rapidly than is possible under any other form of treatment as yet devised.

Prof. Ward employs nuclein solution containing approximately six grains of sodium triticonucleinate to the ounce, standardized to one milligram of organic phosphorus to each cubic centimeter, using this in physiological salt solution made up as follows: Calcium chloride, 0.25; potassium chloride, 0.10; sodium chloride, 9; water, 1000. This is employed as a vehicle for the nuclein, for the reason that it conforms to the normal specific gravity of the blood.

Hitherto nuclein has been credited as producing good effects chiefly through inducing leukocytosis. Prof. Ward considers that its value, when given intravenously, depends not only upon this, but even more upon its upbuilding power over the erythrocytes and hemoglobin.

While leukocytosis is of importance in destroying the tubercle bacilli, the effect of the products of these organisms is what we must overcome. Death occurs from chronic sepsis, from mixed infection, or from profound anemia, resulting from the actions of the toxins or the bacilli upon the erythrocytes.

In the tables presented it is clearly shown that following the intravenous injection of nuclein the percentage of hemoglobin is markedly increased. The number of red corpuscles is likewise increased, and the specific gravity of the blood is almost uniformly brought up to or near normal.

In the technic of intravenous infusion surgical cleanliness must reign supreme. Dr. Ward uses an ordinary infusion bottle with six feet of rubber tubing, one-fourth inch in diameter, and a No. 18 or 20 saline-solution needle. The needle should be sharp and with not too long a cutting edge. The needle is kept in alcohol when not in use. The bottle and tube are sterilized before placing into it the solution. The median cephalic or median basilic vein is selected, a ligature is placed about the arm and the injection made under strict antiseptic precautions. The dose of nuclein is regulated by the results obtained upon the blood.

Out of the forty-eight cases treated in this manner there were five deaths. In no case did the treatment prove harmful. Fifteen of the forty-eight cases are reported, the

others not having been under observation a sufficient length of time. The injections were repeated in from one to seven days. Examinations were made at regular intervals for a period of twenty-four weeks. The net results are summed up by the author as follows:

1. If there is not a net increase in the percentage of hemoglobin in two weeks' time, we do not expect any permanent result.

2. Even when there is no net increase in the hemoglobin, the treatment aids in keeping these people upon their feet.

3. With a constant increase in the percentage of hemoglobin, when the same has reached 85 to 100 percent, and remains there for one month after all treatment has ceased, the patient may be declared well.

Nine of the fifteen cases are reported as recovered, four improved, two died.

Collecting money is by no means the same thing as making it; the tax-gatherer's house is not the mint.

—John Ruskin.

THE MANAGEMENT OF CONSUMPTION

We all well remember the cruel disappointment and the dashing of hopes which followed the announcement, several years ago, that Koch had discovered a cure for consumption. It is of course possible that a real "cure" for this disease may be found some day, and when it is we may be sure that there will be little delay in its adoption by physicians; but the premature vaunting to the layman of alleged "specifics" is greatly to be regretted, because of the misery which their failure causes to thousands of disappointed sufferers.

But while we are waiting for the discovery of a cure for consumption, we can use one remedy which we have at hand in abundance, and without cost to the patient. Fresh air, fresh air, and more fresh air. Yet, like any other remedy, this is of no service unless it is taken into the body. For this purpose exercise out-of-doors is needed—exercise, however, never carried to the point of exhaustion—in order to force the breathing,

expand the lungs, and fill them with the pure air.

It was stated by a Boston physician some years ago that the use of bicycle has lessened the amount of consumption among women, and if this is so, the explanation is not far to seek. Devotion to the bicycle led women to exercise in the open air, and more energetically than it had been possible for most of them in any other way.

In Denmark the postmen often have very long routes in the country regions, and are obliged to walk or ride many miles a day in all kinds of weather; but undesirable as such positions would seem to be, they are eagerly sought after and often by consumptives who want to get well. It has been proved that the work is life-saving, for despite the hardships and the exposure to wind and rain and snow, almost all the invalids who adopt the life become robust and hearty.

Of course, to be effective, open-air exercise must be begun early in the course of the disease, and should always be carried out under the direction of a wise physician, since it is capable of doing harm, must never be abused, and usually should be supplemented by the use of other remedies.

And this leads us to remark that it is a mistake to rely entirely on nature and good food, to the exclusion of proper remedies. Drugs are absolutely essential to the successful treatment of pulmonary tuberculosis.

We work with our heart, liver and stomach; the head and hand are just parts of the productive machinery.

—David Gibson.

A GOOD WORD FOR THE COALTAR PRODUCTS

In *The Monthly Cyclopædia*, Sajous presents a well-founded plea for the much-abused coaltar derivatives. These drugs are used more today for the relief of pain than for any other purpose. They have that advantage over the opiates and their congeners that they do not lead to a habit, at least no such habit as that of morphine-addiction. The objections to these preparations are largely due to their abuse through prescription by pharmacists, rather than

from their legitimate application by physicians. But if this were held as a reason for discontinuing remedies there would be few of our active agents that we should not be compelled to lay aside.

In concluding his article Dr. Sajous says: "Summarizing these facts, it seems plain that far from being harmful, in the hands of the profession, the coaltar derivatives have furnished us the only means to avoid the use of the opiates which, notwithstanding the great service they have rendered humanity, have left in their train victims in numbers untold, and the shadows of which hover at once before the modern practitioner's mind when he is called upon to alleviate suffering."

The coaltar preparations have a useful place and certainly should not be discontinued. Dr. Sajous is right. It is true that their substitution does not fill nearly so large a place as does that of hyoscine and of hyoscyamine when employed instead of morphine for the relief of pain. Nevertheless, each is of value, and when these two groups of remedies are employed in the conditions to which they are better fitted than the opiates, there is left an exceedingly small field in which the latter are really more appropriate. In fact, some observers insist that there is no field whatever left for morphine when we have studied the pathology underlying painful maladies and learn to employ the exact physiologic remedies therefor.

Be it true or false, what is said about men often has as much influence upon their lives and especially upon their destinies, as what they do.—Victor Hugo.

SCOPOLAMINE-MORPHINE ANESTHESIA

In *The Journal of the American Medical Association* C. U. Collins contributes a valuable report on scopolamine and morphine as a preliminary to general anesthesia, the report being based on an experience of eleven hundred cases.

Dr. Collins quotes Terrier, as stating that ether should never be used in relation with this combination. Collins says, however, that in the large majority of his cases ether

was employed after the hypodermic without harmful effects resulting.

Bloodgood has said that the combination named is contraindicated in exophthalmic goiter.

The author, however, did employ it in such cases, and beside the preliminary dose, administered one the night previous to the operation. He observed no harmful results in these exophthalmic-goiter cases, nor did he find that scopolamine and morphine induced contraction of the abdominal vessels, rendering operation difficult, as has been asserted. Occasionally it is difficult, however, for the anesthetist to determine just when the patient is properly under the influence of the ether, since he lies so quietly under the scopolamine-morphine that the anesthetist is apt to think that he is ready and properly relaxed when in fact he is not. In these instances some contraction of the abdominal muscles was noticed, but a little more of the general anesthetic quickly remedied that.

One writer has stated that scopolamine-morphine was used for local anesthesia. Dr. Collins never noticed any local anesthetic effect produced in this manner, nor has he heard of such result. Wood strongly condemned its use as a preliminary measure, but gave no personal experience on which to base his disapproval. On the other hand, Nicholson reported 650 cases in which the combination had been used with no unfavorable results. He also reported experiments on animals which seem to contradict Whitacre's conclusions; the latter claiming that the combination produced fatty degeneration of the kidney and liver when it is injected into animals.

Collins concludes that Gwathmey's prophecy is coming true: the latter said that the preliminary scopolamine-morphine injection, supplemented by as much of any general pulmonary anesthetic as might be necessary, was theoretically correct and clinically safe.

Collins employs the preliminary injection in all patients over eight years of age. If an elderly patient is considered strong enough to undergo an operation, he is considered strong enough to have the beneficial effects

of this combination, and it has not been withheld from any elderly patient on account of his age. Extremely ill patients do better when given but very little of a general anesthetic, and the preliminary of scopolamine and morphine permits the minimum amount of the general anesthetic to produce the desired degree of anesthesia.

At first the author employed chloroform following the combination, but since then has substituted ether, using it in the majority of the cases embodied in the present report.

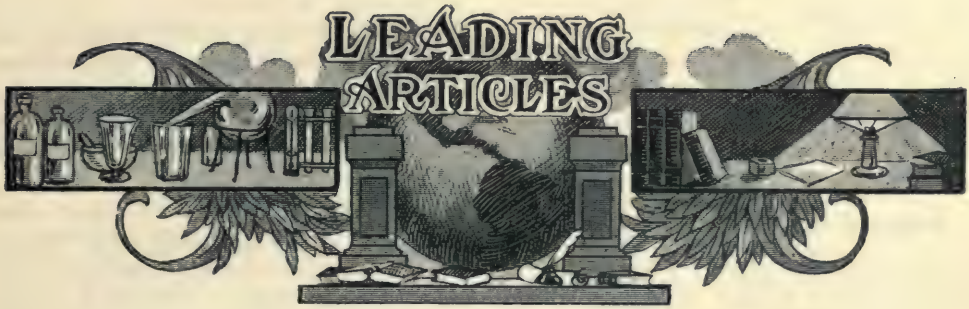
Of late he has been using nitrous-oxide gas following the scopolamine-morphine, finding that there was a great deal less of the convulsive movement of the muscles as the patient was going under the influence of the gas.

No deaths have occurred that could in any way be attributed to the preliminary use of scopolamine-morphine. Unpleasant symptoms appeared in only one case, which he attributed either to an idiosyncrasy or some imperfection in the preparation of the tablets.

Dr. Collins' conclusion is as follows: "The above experience, based on eleven hundred cases, seems to show that scopolamine and morphine as a preliminary to general anesthesia is a rational procedure, adding greatly to the comfort of the patient by relieving him of all nervous apprehension prior to the administration of the general anesthetic, by permitting him to sleep some hours after the operation is completed, by greatly decreasing the postoperative vomiting, and mitigating the dangers of the general anesthesia by lessening the amount necessary to produce the desired effect, and by checking the secretion of mucus in the throat."

Thus the evidence as to the value of preparations of this class keeps on accumulating. It has been our experience that those who use them most like them best, and that the words of criticism come almost exclusively from the men who have had no experience with them.

Dr. Collins having used the scopolamine combination naturally clings to it; with a larger experience with hyoscine-morphine we are sure he would soon appreciate its advantages.



Ex Ignorantia in Sapientiam

*The Slow Growth of Scientific Medicine in the Face of
Incredulity and Intolerance*

By W. A. NEWMAN DORLAND, A. M., M. D., Philadelphia, Penn.

EDITORIAL NOTE.—This splendid paper is an address delivered to the graduating class of Bennett Medical College, Chicago, at the Annual Commencement, May 24, 1910.

YOUR dean, whom I have numbered among my friends for many years, has informed me of the long step forward which you, as a college, have recently taken. It is a step in the right direction, and one which commands the approbation of all well-thinking medical men. It spells progress in letters of flame and means tremendous growth toward the ideal. It shows, as nothing else could have done, that there is life here—vital power capable of development beyond the imagination of man. For who can set a limit to the possibilities of growth? Death means stagnation, cessation, decay; but growth denotes enlargement and improvement toward the illimitable future whose wonders and mysteries defy the most acute and penetrating mind to define. "Eye hath not seen nor ear heard, neither hath it entered into the mind of man to conceive the things" that lie beyond in the unturned pages of futurity.

Now, the magnificent thing that you have done has prompted me to investigate for a few moments, and with you, this very interesting question of growth in our profession. From this study we may learn a thing or two—which will be well, for you may recall that Plato said, "It is better to be

unborn than untaught, for ignorance is the root of misfortune."

Seven Thousand Years of Medical Science

My friend, Dr. James J. Walsh, dean of the Fordham University of Medicine in New York City, not so very long ago made a most remarkable statement. It was to this effect—that the principles of medicine were known and intelligently administered as long as seven thousand years ago. Dr. Walsh knows that of which he speaks. He is a careful student of medical history, and his words come with the weight and authority of a master of his department. Therefore we listen attentively, and accept, even though our acquiescence be tinged with wonder that it is so. His statement is so concise and simple that its eloquence holds us. It was said of the great Prussian field marshal, von Moltke, that he could be eloquently silent in seven languages; and John Milton, we read, refused to let his daughters learn any other than their mother tongue, on the ground that one tongue was enough for a woman. Garrulity is, indeed, a serious affliction that seven thousand years of medical training has not learned to conquer; and delightful as a word well spoken and in season may be,

it remains true that silence may be vastly more eloquent than speech. Even the fool who is silent often passes as wise; but when a man like Dr. Walsh speaks, his words are golden nuggets of thought which open up vistas of learning and investigation undreamed of before.

Why Have We Developed So Slowly?

Seven thousand years of medical science! Instinctively one thought springs into being. Why, then, has the growth and development of our learned profession—as we are so fond of calling it—been as little as it is? Seven thousand years! Had the tiny ball of scientific knowledge which was started on its tremendous journey down the ages from the time of that first Egyptian physician of whom we have any record, who lived in the reign of King Tchser of the third dynasty, about 4500 B. C., met with no opposition in its mighty rush onward, what a tremendous avalanche of scientific acquisition would now be sweeping through the world, bearing its untold blessings to a grateful and appreciative population! What has happened that we of the present day are not borne on the crest of such an imaginary, but much-to-be-desired, wave of scientific medicine as this?

Has it been that the scientists who lived in the dawn of the ages, in the twilight period of the past, when, as we read, even thus early in the authentic history of the world surgery was an organized branch of medicine, anatomy known and even well written up, and traces of highly developed specialism in medicine were to be found—I say, has it been that those early scientists who showed such wonderful initiative and energy have not found worthy successors in all the ages that followed? Are we of today just awakening from a lethargy that has paralyzed growth and impeded all progress? It seems to me that had we behind us seven thousand years of irresistible energy and accumulated clinical experience we should be as far ahead of our present day knowledge of medicine and surgery as the Hindu mystic is ahead of our occidental mind in occultism and things transcendental.

The truth is becoming more and more evident that in many medical things we are but learning anew methods and practices long since forgotten and buried beneath the rubbish of time. "*Nil novi sub sole*"—nothing new under the sun—has never been better demonstrated than in the study of medicine. Probably one of the most interesting and instructive essays ever written was that on the evolution of medicine which was published some years since in the *Journal de Pharmacie* by van Schoor, a few citations from which will amply illustrate my point.

How many of us—and we pride ourselves on our learning—know that Hippocrates was well acquainted with the intestinal patches that Peyer two millenniums later discovered and described? Eudemus, a contemporary of Galen, speaks knowingly of the pancreatic duct which Hoffman and Wirsung first discovered in 1630 A. D. Herophilus in 210 B. C. described the chyloferous vessels which Caspar Aselli discovered in 1600 A. D. In the fourth century before Christ Alcæon incidentally refers to the auditory duct, which two thousand years later was known as the Eustachian tube.

This in anatomy; and what of surgery? Hernial operations, we read, were performed 250 years before Christ; Serapion removed diseased kidneys; and, after having been forgotten for centuries, thoracentesis for the relief of empyema was rediscovered in 1650 A. D. Hippocrates, we find, speaks of intubation of the larynx, and his contemporaries practised asepis by dipping their instruments in boiling water. Cœlius Aurelianus speaks of the successful performance of tracheotomy, and Praxagoras is known to have performed an abdominal section and to have sutured the intestines. Even anesthesia, in a sense, long antedated our modern era; for we are told that as early as the thirteenth century it was customary before operating to administer to patients, by means of sponges placed in the nose, the juices of certain sedative plants, such as stramonium, belladonna and mandragora, consciousness being restored by the application of vinegar compresses.

The clinical teaching of medicine which we have regarded as essentially the modern method was common in Rome two thousand years ago, as Martial's famous epigram shows, which, translated by Witherington, is as follows:

"Languid I lay, and thou camest, O Symmachus,
quickly to see me.
Quickly thou camest, and with thee a hundred
medical students.
The hundred pawed me all over with hands con-
gealed by the north wind—
Ague before I had none, but now, by Apollo!
I have it."*

Hydrotherapy, gymnastics, and the open-air treatment were practised by the Greeks and Romans; hypnotism was highly esteemed by the priestly physicians of the temples of Isis in ancient Egypt; while organotherapy is, perhaps, one of the oldest forms of medication of which we have any mention.

The history of drugs, also, shows a peculiar cyclic feature, certain remedies which were formerly in great vogue falling altogether into disuse, only to be revived as new remedies in a more modern era. Opium, which appears to have been forgotten for several centuries, has been found in ancient Egyptian tombs, and Hippocrates employed it freely as a sedative, as did also Paracelsus; Pythagoras recognized the diuretic value of squill, after which its use lapsed for a long period; Galen speaks of the therapeutic importance of male fern, which centuries later was, through the agency of a charlatan, brought for the first time in modern medicine to the notice of Louis XIV; Lentilius employed arsenic as a febrifuge, and Hippocrates advised its use in cancerous affections, while we of today have only recently re-suggested its employment for the same disease in the form of the cacodylates and arphenal.

Dentistry is generally believed to be a very modern profession. As a matter of fact a complete treatise on pyorrhœa alveolaris was written over two thousand years ago; and mummies have been found in the cemetery of Thebes, probably antedating

3000 B. C., having in their teeth the remains of gold fillings that were well put in (and show good workmanship) nearly five thousand years ago, while others boasted artificial teeth equal to any of our present day.

The Old, Revived, Becomes the New

In this synoptical study of the history of medicine it is interesting to note that the progress which has been made has been spasmodic in nature. Often that which was achieved by one group of men lapsed into oblivion only to be rediscovered and added to by the succeeding—or a later period of activity. Sir William Church in his notable address on medicine, old and new, which appeared recently in *St. Bartholomew's Journal*, has given what is probably the best grouping of the history of medicine as yet proposed, and it beautifully illustrates the point I have been endeavoring to elucidate—the slowness of the growth of medical science. He divides his subject as follows: (1) The pre-Hippocratic period, of unknown length; (2) the period ranging from Hippocrates (460 B. C.) down to the time when Greek learning began to be lost sight of (about 600 A. D.)—a period of one thousand years; (3) from the end of the seventh century after Christ to the time of Harvey—about one thousand years; (4) from Harvey's time till Pasteur's—220 years; (5) from Pasteur and his followers, onward.

It is probable that Hippocrates embodied in his writings the accumulated medical lore of the preceding ages, and enriched this from his own extensive experience. That his extraneous knowledge was not very considerable is evidenced by the purely Grecian character of the medicine of his time. As Church has indicated, "the medicine of Greece, like its philosophy, owed little to outside influence, and certainly did not depend, as has been ignorantly suggested, in any way on Oriental sources." The physicians of Greece were learned men, rich in initiative, and "obviously held a high position in the Grecian communities as educated and philosophical men."

From the days of the "Father of Medicine" to the appearance of Galen the history

*Languebam: sed tu comitatus protinus ad me
Venisti centum, Symmachus, discipulis.
Centum me tetigere manus Aquilone gelatae.
Non habui febrem, Symmachus, nunc habeo.

of medicine is practically a blank, but for several hundred years subsequent to the latter physician we find the medical writings maintaining a high standard of excellence, down to the time of Paul of Ægina. Then there settled upon the western world an inky darkness which swallowed up the Greek learning and culture in a maze of ignorance, intolerance and religious superstition. Church states that "during those years of gloom Europe owed all its knowledge of Greek medicine and philosophy to the Arabians, who translated, transcribed, and borrowed from the Greek authors which came into their possession." The Arabic manuscripts, in turn, were translated into Latin, generally by learned Jews, and thus it came to pass that the Arabian physicians were so highly esteemed during the Middle Ages. After Mundinus, the famous anatomist of Bologna, who died in A. D. 1326, no further progress was noted in the knowledge of anatomy for two hundred years. Then, in the Sixteenth Century, arose a group of giants—Vesalius, Fallopius, Fabricius and others—whose magnificent work paved the way for Harvey to lay "the foundation of scientific physiology based on observation and experiment."

The Tenacity of Medical Superstition

After Harvey's time, is it not remarkable, as Church has noted, that, notwithstanding the enormous progress made by physiologic knowledge, the views of diseases were not materially altered until these days of ours, and that their actual etiology was not understood any better than in the days of the Greeks? It required two thousand years to supplant the miasmal theory of malaria and yellow fever by the established truth of mosquito infection. Sixty years must elapse from the announcement by Spence, in 1841, that a loose fabric of *white threads kept mosquitoes away* much more effectively than one of black threads, before it became possible to establish the fact that mosquitoes have a well-developed color-sense. Today we have only begun to recognize the pernicious influence of the domestic fly as a pest-producer and a transmitter of typhoid fever and

other loathsome diseases; and it was but one hundred years ago that a contemporary of Adam Kuhn and Benjamin Rush published the following:¹ "Flies are among our best friends at this season of the year. A living fly purifies the atmosphere by destroying putrefaction; but a dead one generates pestilential air. Let us, instead of poison, set some nourishing food for them; and instead of darkening our rooms to drive them out, open our windows and invite them in. Give them plenty to eat on the sideboard, and they will not infest us at table. Furnish them with plenty of paper network to lodge in, and they will not spoil our furniture."(!)

The Ancient Idea Regarding Catarrh

The ancient belief that catarrh resulted from a flux from the brain had firmly ingrafted itself upon the medical mind, and died very hard. Even at the zenith of "the age of reason"—the reign of the English Queen Anne—James Handley, a popular writer on health, remarks: "Fernelius saith, besides serum within the cranium, there's other excrements gathered in the external parts of the head, especially under the cutis of the vertex, where the vessels have their extremities, which, when they grow turgid with too much serum or other humour, they shed forth under the skin that which they cannot carry off, and there it remains, because the thickness and looseness of the cutis permits it not to evaporate; and there's sometimes so great a collection here, that it causeth a soft swelling, that manifestly heaves up the pericranium from the cranium. This is assuredly the source of all external distillation." And the writer marvels that the ancients never noticed what to him is demonstrable truth! "Hence," he continues, "rheumes fall into the eyes, cheeks, teeth, neck, shoulder-blades, sides, back, loins, hips, thighs and all the joints, and this is certainly the foundation of every external pain, particularly in a catarrh." It was to clear the brain of "rheumes and humours" that the habit of taking snuff originated—and this after sixty-five hundred years of medical scientific growth!

1. *American Daily Advertiser*, Phila., July, 1802.

Charles the Second of England, we are told, lived less than a week after he incurred his fatal illness, and, if we consider the remarkable polypharmacy to which he was subjected, the only wonder is that he lived as long as he did. Listen to *some* of the extraordinary details of those last days:¹ "The royal patient had fourteen doctors in attendance. They bled him to the extent of thirty-four ounces; they shaved his hair and applied blistering agents all over his head; they also applied plasters to the soles of his feet; and they dosed him with orange infusion of the metals; white vitriol dissolved in compound pæony water; powder of sacred bitter; syrup of buckhorn; rock salt; emetic wine; two-blend pills; bryony compound; powder of white hellebore roots; powder of cowslip flowers; best manna; cream of tartar; barley and licorice; sweet almond kernels; sal ammoniac; antidotal milk-water; mallow root; melon seeds; chicken broth; bark of elm; a julep of black-cherry water; flowers of lime; lilies-of-the-valley; pæony compound; spirit of lavender, prepared pearls, and white sugar candy; senna leaves; flowers of chamomile; gentian root; nutmeg; ale made without hops; spirit of human skull (commonly employed in convulsive disorders; the purpose was suggestive, viz., to excite horror, as it was to be the skull of a man who had died a violent death); Peruvian bark; syrup of cloves; Raleigh's stronger antidote; goa stone; Rhine wine; and Oriental bezoar stone." And then the good king died! It is interesting to note that he was suffering from Bright's disease, but I doubt if the shrewdest diagnostician among you could have guessed the complaint from a perusal of this "shotgun" system of medication. And this after over six thousand years of scientific medical growth!

The Modern Awakening in Science

Gentlemen, the world grows better, and we are now living in the most expansive age the world has ever seen. No one will controvert me, I think, when I state that more

progress has been made in medical science during the past fifty years than during the whole prior existence of the human race; and this, I believe, is but a forecast of the wonders of the fifty years to come. Miracles are being enacted all around us in other departments of science—why not in medicine? Steel cannon, smokeless powder and the use of high explosives in shells have revolutionized warfare since the Franco-Prussian War, but the noise of artillery fire and the discharge of smaller weapons is about to be suppressed. The war-balloon and the submarine will, doubtless, speedily settle the next great conflict. The airship is looming on the near horizon. The network of wires will vanish before the early onset of wireless telegraphy and telephony. The synthetic compounds of the chemical laboratory are supplanting the products of nature. Radioactivity has changed the fundamentals of physics. The transmutation of metals is at hand. Electricity is vanquishing steam; and the ultraviolet rays are astounding us by their marvelous potentiality.

Why is it that all this wonderful awakening has not come upon us long before this? The moralist will tell you the time was not ripe, and that in the fulness of time all things desirable will develop. But this is but a feeble effort in explanation of a remarkable fact. The truth is, there have been potent causes to account for the retardation of notable progress in seven thousand years. It is true that due responsibility must be laid upon the crudeness and ineffectiveness of the means of perpetuating knowledge which were overcome when Gutenberg invented printing. The tediousness of manual transcription and the impossibility of multiplying records were powerful hindrances to rapid development. Nor must we forget the vandalism of evil men who from sheer wantonness destroyed precious archives and records, as at the fall of Alexandria. But these have been as nothing when compared with the obstructive tendencies that so often dominate the minds of otherwise righteous men. Someone has said, "the world is held back from true progress not so much by

1. "The Last Days of Charles II." By Dr. Raymond Crawford.—A monograph from the Clarendon Press.

the badness of bad men, as by the obstinacy of good men who have stopped growing." Incredulity and intolerance—these are the potent obstacles to progress of any kind. Incredulity is the rock upon which small minds rivet; intolerance is the shoal upon which greater men shelve; and it has been largely due to the pernicious influence of these two factors that progress in medicine, as in other sciences, has been retarded beyond computation.

The Evil Power of Incredulity

"Can any good thing come out of Nazareth?" was the cry of the incredulous two thousand years ago, and the answer has been thundering down the ages ever since. The incredulity of man does not limit itself to religion and the affairs of mysticism. Not a discovery in science is announced without arousing skepticism and even violent opposition, and this spirit of agnosticism is carried on to the scientist himself. We doubt the fact and we doubt the ability of the man. We contemptuously discredit his claim and himself. Thus would we quench the flame of scientific progress with the water of incredulity, ignoring the fact which stands out prominently against the pages of history that it has ever been the most unlikely source from which has arisen the greatest good. "The door of truth cannot be opened by the key of prejudice," and we but cast mountains of difficulty in our own way and in the path of scientific progress by such a suicidal course as this. After all, common sense is far from common, and the ultra-conservatism upon which we pride ourselves is merely prejudice and envious spite parading in the garb of a virtue.

Often it is ignorance of the matter in question which decides the position of opposition, and could an intercommunication be established between the new thing and its antagonist the skepticism would vanish as a cloud before a dry wind. It is said that after Marconi had been for two years successfully transmitting messages "via wireless" over great distances, a certain prominent railroad surveyor scoffed at the scheme as chimerical, and furthermore, "the only kind

of ether with which he was familiar was the kind that mercifully makes men oblivious to suffering." Such a man as this, had he lived seventy-five years earlier, would have derided the possibility of anesthesia or of sending messages by wire. He is one of a well-recognized class—and how powerful this class in retarding progress! Anything that is new is impossible, simply because, to these individuals, it is unknown. Because of their unbelief a difficult pathway lies before the new and good, and the man who does is condemned as an enthusiast and as a dangerous and unreliable experimenter. Surely, those who have done things, who have accomplished most for their own advancement and for humanity, have "come up out of great tribulation." The incredulity of their less energetic fellows hampers them and often, seemingly, destroys their usefulness—for the time. From their apparent defeat, however, they arise in the fulness of time to the joy of recognized merit; or, as someone has happily said, "Perhaps—who knows?—the story of the phoenix from the ashes means that the bird tasted a great deal better after it had been cooked." We first "roast" our great men, then adulate them.

The corollary to be derived from this curious trait of human nature is evident. Let the good deed of scientific inspiration be done unmindful of criticism, and leave the settling of things to futurity. The president of one of the large railroads of our country complained to the general manager of the road of the number of accidents that had occurred. "Well," was the happy answer, as the man glanced over the casualty figures, "the wrecks mean that something's moving along our railroads." It was because things were not kept moving, but were held up by the incredulity of the world, that the seven thousand years of medicine that are behind us have not a better record—good as it is—to their credit. The one vital point, then, where we are all so prone to fall is this: Forget the source of the new thing; the personality of the discoverer; the tenets of the school or profession from which it takes its origin; the name by which it is burdened—or boosted; the class by which

it is first accepted and which gives local coloring to it; and consider only the intrinsic worth it has and its adaptability to the circumstances which exist. This is the only test by which the new must stand or fall; and sooner or later all new things must come beneath its infallible decree.

Intolerance the Bane of Science

There is one other potent reason for the delays and periods of decay that mar the pages of scientific history, including that of medicine, and it is the intolerance of learned men and of schools of learning for the doctrines, tenets, and deeds of others not of their persuasion. Because "they are not of us" they are wrong and therefore must be suppressed—this is their argument, as fallacious as it is unreasonable. In variety of thought, in difference of opinion, in dissimilarity of workmanship, in all of these rests the main hope and prospect of progress, and the narrowness of mental vision which condemns as wrong and worthless all that is not in accord with the prescribed method is the surest way to mental and moral stagnation. This is the open secret of the "Dark Ages," when rank superstition and intolerant priestcraft smothered the feeble flame of science and excommunicated Galileo and other great souls whose noble heresies dared to flaunt themselves in the face of dogmatic creed. The wonder is not that the times were dark, but that learning and science survived at all.

Nor is this spirit of intolerance dead. Even in these enlightened times it dares to raise its evil countenance to decry a new theory or a plausible doctrine before it has been heard and tested. A noted divine in my own city, when condemning the popular clamor which arose against a certain opera because of the supposed immorality of the production and its author, and that among educated people who had never read the poem nor seen it produced, remarked: "It savors too palpably of the spirit of the dark ages with all its savagery of religious fanaticism, the same spirit of intolerance, indeed, that immured Galileo, burned Servetus, did to death tens of thousands of the

devotees of scientific progress, and has stained the annals of mankind with unnumbered crimes in the name of religion . . . The immorality of the author of the lines is admitted, but the same law applied to literature would exclude the Psalms of David and the Epistles of St. Paul . . . Such a canon would destroy the value of all the decrees of wicked popes and invalidate the apostolic succession itself. Infallibility in office does not necessitate impeccability in character. . . . In the Vatican at Rome are the works of Raphael, and Raphael was a rake. The 'Last Supper' was painted by Leonardo da Vinci, and he was a skeptic. All the cathedrals of Europe are decorated with the art treasures produced in the period of the Renaissance, and that was a period of Pyrrhonism in religion and looseness in morals. . . . Does the charge that the opera in question is not veracious . . . history amount to anything? It sounds ridiculous as a canon of literary judgment. It would consign to destruction the choicest literary productions of the world. Even the Book of Job could not bear such a test. Milton's 'Paradise Lost' is a heroic poem, not a veracious history, and Milton's Satan is better than his God. Shakespeare's historical tragedies could not pass muster, and as for Æschylus, Virgil, Homer, the prose-poetical romances of Walter Scott, 'Ben Hur,' and many a gem beside, they would have no place but in the purgatorial index. . . . Many of the world's best creations have been condemned at the outset, simply because they have overleaped tradition. Time is a slow thunderbolt and may be trusted to shatter all false art as all false religion." This from a broad-minded and unusually tolerant religionary.

The doctrine of evolution awakened a veritable storm of protest and persecution, but who today will deny the theory of Darwin and Wallace? We, as scientific men, are not compelled to accept Gaskell's theory of the origin of the vertebrates, beautiful and plausible as it is, nor Sajous' theory of the internal secretions, nor Doyen's very recent enunciation of the cure of cancer by electro-thermic coagulation, but who among us will

care to assume the position of denunciation and deny as possible the real good that lies behind the published writings of these earnest workers? The point of view varies with the individual, and one point of vantage will reveal wonders and truths that are unseen from the standpoint of another investigator. What we need is the broadness of vision which will recognize the great truth that there is an element of good in everything, be it theory or method or system—a new atom of knowledge, surrounded, it is true, by a shell of dross, but nevertheless an imperishable atom to be added to the scientific accumulation of the ages.

Moreover, this spirit of intolerance is not aimed alone at the work, but often concentrates against the worker himself. The audacity of his enthusiasm which dares to enunciate a new theory or truth not infrequently brings down upon his head a storm of invective and outrageous abuse which is astounding as it is disgraceful. It is argued that he has sprung from the people; that his education has not been as thorough as might have been desired; that his personal or family life is not altogether unspotted—anything, in fact, which will tend to detract from the excellence of his achievement. It is a trait of mind that I cannot fully comprehend which will at much pains delve into the musty tomes of the forgotten past in order to unearth from the muck-hills of the limbo of oblivion some malodorous taint of character or some unsavory record to besmirch the reputation of the heroes of our imagination or of our national or professional history. It is the final and most malicious attack of the spirit of intolerance of which I have been speaking, and which in the aspect of ultraiconoclasm would uproot and destroy without the power of replacing that which has thereby been lost by something better and higher. Even the reputations of the dead are not always held sacred.

What matters it to you or to me that Paul Revere was a mere jack-of-all-trades, and even tinkered in dentistry and posed as a barber-surgeon, when we know that the wild dash he made on that April night awakened the entire country, as it then was,

into an unquenchable resistance to the despotism and tyrannous abuse that was oppressing it? The superficiality of character is forgotten in the glory of the one deed that made him immortal. If it be true that Samuel Adams was a defaulter and John Hancock a smuggler, and that Benjamin Franklin as postmaster of Boston pilfered letters from the mail, what care you and I, so long as we know that these great and noble patriots, taking their lives in their hands, defied their own kith and kin and dared one of the greatest military powers of their age to say them nay? Patrick Henry may have been the most unreliable of men; the Revolutionary heroes in general “a coterie of thieves who delighted to betray the public trust;” the immortal Washington addicted to profanity; and our own great Lincoln illiterate and vulgar—but what and where would our country be today could some dire cataclysm erase from the pages of history this galaxy of glowing names? “Remove first the beam from thine own eye,” was sage advice, and Lavater showed his profundity when he said, “Just as you are pleased at finding faults, you are displeased at finding perfections.”

I need not speak further. The fact remains that while there are behind us of today seven thousand years of medical science, as Dr. Walsh has stated, we have not the value of seven thousand years of scientific progress to our credit. The reasons for this we now know, and it remains for us, for you and for me who have the good of this noblest of professions at heart, to do our tiny part in breaking down the ramparts of ignorance, incredulity and intolerance which have so long and so persistently barred the rapid progress of scientific medicine. The improvement of the last half century in this direction shows that the hour is ripe. A broader view of things; a tolerance toward the new and strange in science, until it has been demonstrated as false; and an earnest investigation of theories as they are promulgated to sound their depths in order that we may ascertain their worth—this is the order of the day in progressive medicine.

The Prevention of Tuberculosis

With a Discussion of Its Direct and Indirect Causes

By S. ADOLPHUS KNOPF, M. D., New York

Professor of Physiotherapy in the New York Post-Graduate School and Hospital; Director of the National Association for the Study and Prevention of Tuberculosis; Associate Director of the Clinic for Pulmonary Diseases of the Health Department, etc.

AS the title of this contribution indicates, the prophylaxis of tuberculosis has two great phases. One deals with the removal of the direct causes, such as infection from the tubercle bacillus by inhalation, ingestion, and inoculation; the other with overcoming predispositions, inherited or acquired.

Direct Causes

To prevent an inhalation tuberculosis, we must do away with the possibility of the ejected tuberculous sputum becoming dried and pulverized and being stirred up into the air which human beings inhale. The strictest spitting regulations, that is to say, to forbid and absolutely prevent expectorating anywhere within-doors except in a proper receptacle, is the first condition which must be insisted upon. Not only in the homes, factories, and workshops should there be proper sputum receptacles and strict spitting regulations, but the same care to prevent tuberculous or other possibly infected spittle from drying and pulverizing, should be exercised in public buildings, railway stations, assembly rooms, halls; in short, everywhere where people congregate.

All stationary sputum receptacles or cuspidors should contain a sufficient amount of water to prevent the sputum from drying, and should be covered. I insist on a cover, because flies and other insects often partake of the contents of an uncovered spittoon and carry away enough infectious material to become real propagators of the disease. For example, the fly may carry on its feet any number of tuberculosis germs and deposit them on articles of food. Living tubercle bacilli have been found in the excrement of flies in the sickroom, and even in the dust

of crumbled dead flies bacilli have been found which had retained their virulence.

The ideal public cuspidor is, to my mind, the elevated self-flushing one with supply and waste-pipe and cover. To the close observer it is an interesting psychological phenomenon that a negative command is never as readily obeyed as a positive one. I firmly believe that if we provide a sufficient number of spittoons in our public places and put over them a sign reading "spit here," there will be fewer evidences of promiscuous spitting on the floors than where the anti-spitting signs read "It is forbidden by law to expectorate," etc.

Expectoration in the Streets

Regarding expectorating out-of-doors, every city and town should have proper regulations which should be firmly enforced. If we cannot have stationary self-flushing cuspidors in our streets, let us at least try to educate or compel people not to expectorate on the sidewalks where the matter may come in contact with the shoes or clothing of pedestrians, but into the gutter whence it will be most readily carried away into the sewers with the next rain or flushing of the street.

Then there is the individual care which the consumptive should exercise outside of as well as in his home. To recommend the use of a pocket-flask of glass or metal or a pocket-purse of pasteboard or paper is useless. Few consumptives will be willing to use as sputum receptacle in public anything that will attract the attention of other people to their malady. While pocket- or other portable cuspidors are of value in sanatoria and hospitals, they are very rarely used outside of such institutions. I have

known patients to object very strongly even to the use of Japanese handkerchiefs in public for the very same reason which I have given for their disinclination to using pocket-cuspidors.

On the other hand, though, I have found that patients are perfectly willing to use very cheap handkerchiefs, or cheap muslin cut up in squares resembling handkerchiefs, to expectorate into. I therefore advise them to supply themselves with a number of these make-believe handkerchiefs on going out in the morning and place the soiled ones in a separate pocket (or bag for a woman) and burn them up on returning home. It is wise to have the pocket or bag which serves as receptacle for the soiled muslin cloths lined with some impermeable material.

Provision for Bed Patients

Bed patients should have within easy reach light metal, easily managed sputum cups with cover. Pasteboard spit-cups in metal frames are also very recommendable for bed patients. In the last stages of the disease patients are often so feeble as not to be able to rise in order to make use of even the lightest sputum receptacles. In such instances the nurse should provide moist cloths to receive the sputum and these should be burned before they have a chance to dry. If the sputum cannot be disposed of by fire with its receptacle of cloth, paper or pasteboard, it should be poured into the toilet. The saprophytic organisms in the sewage usually suffice to annihilate the tuberculous germs.

Necessity of Care of Dairy Animals

Against the danger from an ingestion-tuberculosis the state and municipal authorities should protect us by the enactment and strict enforcement of good bovine laws and pure-milk ordinances. Infection from tuberculous meat seems rare; from tuberculous milk it is probably a great deal more frequent. While pure raw milk is better than pasteurized or sterilized milk, where there is doubt as to the milk's purity, conscientious pasteurization seems indicated and justified.

Inoculation-tuberculosis has its origin most frequently in wounds caused by nicked

porcelain or glass spittoons and the entrance of some tuberculous matter into the wound. Education and prudence, and the replacing of porcelain spittoons by unbreakable metal spittoons are the best means to prevent this source of infection.

Individuals should be instructed that whenever they wound themselves, they should, in order to avoid tuberculous or other infection, let the wound bleed freely so as to wash away the infectious matter, then cover it with a clean cloth previously placed in hot water, then seek the advice of a physician who will dress the wound antiseptically. The physician or student should remember these precautions if he should have been so unfortunate as to wound himself in performing autopsies in dissecting a tuberculous body.

Inoculation-tuberculosis has resulted in a number of instances from tattooing. Professional tattooing is usually practised by men who are invalids, too weak to do hard work, and very often his invalidism is due to tuberculosis. Men who follow the profession of tattooing are often in the habit of dissolving the colors necessary for their work with their own saliva. Hence the infection when the operator is tuberculous. The remedy for this source of infection lies in warning the laity against the danger which may arise as a result from this barbarous practice of decorating the human skin.

Danger from Circumcision

Physicians should be familiar with a less but nevertheless sufficiently frequent cause of inoculation-tuberculosis. I refer to that which may arise through ritual circumcision, performed according to Jewish rites when the operator happens to be consumptive. It is well known that, through lack of skill in after-treatment, secondary hemorrhage and wound infection have ensued. Too many a young life has thus been needlessly sacrificed.

The operation of circumcision, when skilfully and rapidly performed, is in itself trifling, but the sucking of the prepuce afterward makes it dangerous. Since it will be difficult to stop this practice by a

simple protest on the part of physicians, and as the law cannot interfere with the free exercise of a religious rite, I would suggest as a remedy that only such persons should be allowed to perform circumcision who have shown the necessary skill before a medical board of examiners, and that every time they are called upon to perform the rite, they should submit themselves to a medical examination. Only when bearing a certificate from a regular physician, stating the absolute freedom from specific diseases, should they be allowed to perform ritual circumcision.

As another reliable measure against the possibility of inoculating the child, when the parents insist upon the orthodox method of circumcision, is the suction by the aid of a glass tube, as practised in France and Germany.

Coughs and Kissing

Droplet infection, that is to say, infection during the so-called dry cough through the expulsion of small particles of bacilliferous saliva, may cause either ingestion or inhalation tuberculosis. The remedy for it is to teach the patient to hold his hand or handkerchief before his mouth when coughing or sneezing.

Against the danger of infection which may arise from kissing, or from the use of the spoons, forks, or glasses of consumptives without having had them thoroughly cleaned in boiling water, education alone can serve as a preventive.

A child should be taught not to put any articles in his mouth which may have been in the mouth of another. He should be plainly told that to swap apple cores, chewing gum, half-eaten food, whistles, or bean-blowers might give a disease, not only tuberculosis, but also diphtheria, whooping-cough, or measles.

One thing must always be remembered. Without the hearty cooperation of the patient no appreciable result in the prophylaxis of tuberculosis can be obtained. The consumptive should be made to understand that by helping to remove various causes of infection whereby others may contract the

disease, he also lessens the danger of he himself becoming reinfected. Those living and dealing with the consumptive should be firm when firmness is needed, but should be kind to him always and bear in mind that the honest, conscientious consumptive can be very safely associated with. To treat him as if his presence would mean danger is cruel, unwise, and inhumane. The more kindly he is treated, the more willing will he be to obey the instructions appertaining to prophylaxis.

Indirect Causes of Transmission

While direct bacillary transmission of tuberculosis, through the placenta, cannot be denied, for it does occur occasionally, it is rare enough to be considered a negligible quantity, and the frequency of tuberculosis in children must be ascribed to postnatal infection. Very often it is the close contact with the tuberculous mother, more rarely with the tuberculous father, which causes the child to become tuberculous.

Having inherited a predisposition which is in reality nothing but a physiological poverty, such a child without the natural defenses against the invasion of disease becomes a victim to that one to which it is most frequently exposed. If such a child is removed from the sources of postnatal infection and raised in healthful, sanitary environments, and attention paid to its normal physical and mental development, the probabilities are that it will develop into a strong, healthy man or woman and never have tuberculosis. Of course, such a child should not be sent to school before the age of eight, and when it does go it should attend an open-air school. It should not be burdened with home lessons, but have plenty of time to play and to sleep.

A predisposition can be acquired at any age through disease, certain occupations, privations or want, bad housing and under-feeding, overwork, syphilis, and, last but not least, alcoholism.

All exanthematous diseases of childhood—measles, chicken-pox, scarlet-fever, etc., predispose the child to tuberculosis; so does diphtheria. All diseases of the respiratory

organs in child and adult life (bronchitis, grip, whooping-cough, pneumonia or pleurisy) predispose to tuberculosis. To prevent these convalescents from contracting the disease, great care should be exercised not to expose them to possible infection.

The Factor of Occupation

All indoor occupations and particularly such as expose the individual to the constant inhalation of irritating dust (tailoring, weaving, stone-cutting, etc.) are particularly prone to render an individual susceptible to the invasion of the tubercle bacilli. The enactment and enforcement of proper workshop and factory laws, education of employer and employee as to proper ventilation and proper precautionary measures to limit the danger of contracting occupation-diseases, are the remedies for overcoming these predisposing factors.

Child-labor or overwork on the part of adult men and women are factors which must be enumerated as strongly predisposing to tuberculosis. They undermine the system and render its germicidal and phagocytic powers *nil*. The remedies are abolition of child-labor in all its forms and reasonable labor laws which make the conditions rendering the honest laborer liable to disease by overwork impossible.

Veneral diseases can only be prevented by education, repressive and wise humanitarian efforts, but not oppressively. The same, I believe, can be said of alcoholism. But of alcoholism it must be said that, while it often causes poverty and want, bad housing and underfeeding, it is not infrequently the result of poverty and want, lack of air, and insufficient food.

Housing of the Masses

The sanitary housing of the masses will reduce the number of individuals addicted to alcoholism as well as those who contract tuberculosis. A good house, well lighted, well ventilated, and well kept by the wife trained in housekeeping and good cooking, a good though plain meal well cooked and appetizingly served, will counteract to a very

appreciable degree the temptations of the saloon.

Tuberculosis always breeds more frequently in congested districts. The more dense the population, the more tuberculosis; and the worse the tenements, the more deaths from tuberculosis. There should be more model tenement houses offering sanitary homes to the laborer who must remain in the city and be near his workshop. However, it must be borne in mind that the rental for such sanitary homes for the laborers should not be so high that he and his family must deprive or stint themselves of other necessities of life. When one considers the present unusually high prices of articles of food and clothing, the rental the average laborer is called upon to pay should not exceed one-fifth of his income.

Overcrowding and Immigration

The tendency of country people to move to the city and of immigrants from foreign countries to cluster in large centers of population is unfortunate. These latter should be distributed in our as yet thinly populated states and induced to pursue agriculture and horticulture. The tide of emigration from village to city should be reversed. If tuberculosis has made its appearance in a family living in a large city, the physician should exert all his influence to induce, especially the younger members, to migrate to the country and seek outdoor occupations.

Statesmen should protect the interests of farmers, so that farming will have more attraction to the rising generation than it has had in the last few decades; and philanthropists should aid the statesmen by endowing institutions for instruction in scientific and profitable agriculture, and also by providing healthful amusements, good libraries, and other educational institutions in country districts, thus making living outside of large cities more interesting and attractive to young people; in short, the love of nature and life in the open air should be more cultivated. In the proportion in which this is done tuberculosis will decrease.

It is beyond the scope of this paper to enter into a discussion of all the social fac-

tors which are indirectly responsible for the prevalence of tuberculosis.

All that I can say in conclusion is, that just in the degree that we improve the social conditions of the masses, the housing and living conditions, the opportunities for happiness and the enjoyment

of life, in so much will we reduce tuberculosis among them. In other words, in as far as we solve the social problem, so much will we come nearer to solving the tuberculosis problem and will see the dawn of the day when the Great White Plague shall be a plague no more.

The Specific Treatment of Tuberculosis

Its Modern Theory and Practice

By H. J. ACHARD, M. D., Chicago, Illinois

A SPECIFIC remedy is one which has a particularly favorable action upon a certain disease, an action which it does not exert in other affections, and which is not exerted in the same disease by other remedies. Practically the only truly specific remedies which we have known, until recently, are mercury for syphilis and quinine for malaria.

From unknown times physicians have searched for a specific remedy in tuberculosis, but without success. Cornet describes the chemical "*specifica*" (American edition, Cornet's "Tuberculosis," 1904, p. 579. Consult also Lawrason Brown in Klebs' "Tuberculosis," 1909, p. 575) which have been advocated and have had each its vogue.

With the discovery of the tubercle bacillus the attempts to discover an antagonistic remedy were renewed with great energy, but again resulted in failure. It was found that chemicals which, *in vitro*, would injure the bacillus, could not be introduced into the organism in sufficient strength to destroy the bacilli in the body without injury to the latter, the more so as the tubercle bacilli are protected against the action of chemicals by their fatty or waxy capsules.

Koch's Discovery and Early Experience with Tuberculin

In 1890 Koch announced the discovery of a remedy which immunized guinea-pigs against tuberculous infection and which was capable of arresting the process, even in

animals already in an advanced stage, of general tuberculosis. I cannot, here, relate the sad history of the first tuberculin era, the principal data of which can be found in the books by Cornet, Klebs, Pottenger and others.

Disappointing as were the results, they nevertheless contained some valuable lessons, among others, that tuberculosis cannot be treated solely by remedies which destroy the tubercle bacillus, for instance by antibacterial remedies, but that the intoxication due to the tuberculous toxins, as well as the frequently coexisting mixed infection and intoxication, also require attention. In this country it was first of all Dr. Karl von Ruck of Asheville, N. C., who persisted in the search for specific remedies, and for a space of time he stood practically alone in his position.

Healing in Tuberculosis

If we examine a tuberculous lung in which the tuberculous process has healed, we find that the healing process consists in the formation of a fibrous capsule enclosing the focus, while in progressive disease the tuberculous area caseates and softens, so that the lung-tissue is gradually destroyed. It has been found, at first by French investigators, that the fibrosing as well as the necrosing action is not due directly to the tubercle bacillus, but to the action of different toxins elaborated by it; accordingly, as the one or the other kind predominates, arrest or progress of the tuberculosis results.

The healing or cure of tuberculosis also depends upon the resistance which the organism opposes to the action, both bacterial and toxic, of the tubercle bacillus. The organism does not by any means remain passive on being invaded by harmful bacteria, but resists their action by mechanical and by chemical means. The former find their expression in the action of the leukocytes which engulf the bacteria and carry them to the nearest lymph-nodes, and these, according to Metchnikoff, destroy, or "devour," them (phagocytosis).

The chemical means lie in certain substances, called antibodies, which exert a chemical influence upon the tubercle bacilli and tend to neutralize the harmful action of their toxins. Of such antibodies the agglutinins, precipitins, bacteriolysins and opsonins have especially been investigated and have become the subject of an enormous literature. For our purpose it will suffice to say that the aim of treatment by general methods is to increase the general resistance of the organism against harmful influences, while it is the aim of specific treatment to stimulate the production of antibodies, both antibacterial and antitoxic, which are specific for the existing disease-germs, if these antibodies cannot be introduced into the organism already formed as is the case in serum treatment.

Active and Passive Immunization

If we then apply the term "immunization" to the specific treatment of infectious diseases in general, and of tuberculosis in particular, we call the introduction of immunizing substances (such as are obtained from tubercle bacilli or their culture products) "*active immunization*," and the introduction of immune substances (immune serum from immunized animals) "*passive immunization*." It is the latter only to which the term serum- or lymph-therapy is properly applicable, because only here is a serum employed. The principal antituberculosis sera known are those of Marmorek and of Maragliano.

The remedies used for active immunization are sometimes wrongly described as

tuberculins, without any differentiation as to their derivation and nature. Tuberculins are preparations obtained from the culture-fluid upon which tubercle bacilli have been grown. They contain the soluble toxins that were separated from the growing bacilli. Tuberculins act chiefly as stimulants upon the periphery of the tubercle and often cause local inflammations which are dangerous. They may produce a degree of immunity by specific proteins derived from the bodies of tubercle bacilli, especially if the preparation is made from the fluid of very old cultures in which some of the bodies of the tubercle bacilli have become disintegrated and their proteins extracted or dissolved in the fluid. This class of remedies is represented, for instance, by the original, or old, tuberculin of Koch, and by the bouillon filtré of Denys.

The bacillus-emulsion of Koch, the watery extract of tubercle bacilli of von Ruck, and similar preparations differ from the tuberculins in that the culture-fluid does not enter into their preparation. The tubercle bacilli are carefully collected and the culture-fluid is washed off, after which the bacilli are ground up. In the case of the watery extract of tubercle bacilli, the bacilli, after washing, are first extracted with alcohol and ether until all their fats and waxes are removed, because these do not possess any immunizing value and are in fact harmful. Preparations derived from the tubercle bacilli themselves arrest the growth and multiplication of tubercle bacilli in the tissues; they stimulate the production of specific antibodies from the tissue-fluids (or from the leukocytes?) and thus produce an active immunization.

The Value of Specific Treatment

The enthusiastic adherents of the climatic-hygienic-dietetic method of treating tuberculosis claim that this method suffices in itself to bring favorable cases of tuberculosis to be arrested, and they do not always show a very intelligent discrimination in determining their favorable cases. While it is true that these general methods are of the greatest value and importance and that they may even, in a small number of cases, lead

to an arrest of the disease and to an apparent cure, they unfortunately show such desirable results only in a comparatively small percentage of cases. Pottenger has, from the literature, collected reports on 611 cases in the first stage of the disease treated in sanatoria by the most approved general methods, but without specific remedies, and resulting in 391, or 64 percent; of apparent cures, while of 589 cases in the first stage treated with tuberculin, in addition to the other methods, 496, or 84.2 percent, were apparently cured.

Drs. Karl and Silvio Von Ruck give an interesting tabulation of their experiences in consumptives treated by general methods alone, and with tuberculin, or watery extract of tubercle bacilli, in addition.

In 782 cases treated from 1888 to 1908 without specific remedies the results were on discharge:

Apparently recovered....	90, or 11.9 percent
Improved	238, or 30.5 percent
Stationary or progressive..	454, or 57.6 percent

Of 723 cases which, in addition to the usual methods were treated with tuberculin or some of its modifications, the product being derived from the culture fluid upon which tubercle bacilli had grown to maturity, there were on discharge:

Apparently recovered	266, or 36.8 percent
Improved	310, or 42.8 percent
Stationary or progressive..	147, or 20.4 percent

Of 1503 cases that were treated with the watery extract of tubercle bacilli, the culture-fluid not entering into the preparation, there were on discharge:

Apparently recovered	834, or 55.5 percent
Improved	508, or 33.8 percent
Stationary or progressive..	161, or 10.7 percent

In their report for the years 1905 and 1906 they tabulate the results of over 100 other physicians who had likewise employed the watery extract of tubercle bacilli in institutions and in general practice. Their material comprised 2,183 cases, and the clinical results obtained differ but little from their own. Of these patients there were on discharge:

Apparently recovered ...	1098, or 50.3 percent
Improved	639, or 29.4 percent
Stationary or progressive..	446, or 20.3 percent

A very serious drawback to the exclusive employment of general methods is that the results are not permanent. Inquiries to determine the permanency of results from general methods, including climatic treatment, made by Von Ruck and by others, have shown that of all cases discharged as improved or apparently cured there were less than 10 percent that had not seriously relapsed or succumbed to their disease in the course of from two to five years thereafter. On the other hand, of 602 patients treated by Von Ruck with the watery extract of tubercle bacilli and who had been dismissed from two to ten years prior to the inquiry there had been dismissed as apparently cured, 400, and of these had remained without relapse 320, or 80 percent. There had been dismissed as improved 202, and of these had remained without relapse 94, or 46.5 percent. We see thus that the addition of specific remedies to the general climatic, hygienic and dietetic methods of treatment not only offers far better clinical results but affords in addition a greater promise that the attained results will be preserved.

Adaptation of Remedies to Cases

The selection of cases suitable for specific treatment, the determination of the remedy to be employed and of its dosage and frequency of administration is not a matter lightly to be undertaken. The problems involved in the question of active immunization are many and varied and require careful study. It is the writer's conviction that this method of treatment should only be undertaken after a course of study and training with one who has mastered it.

It goes without saying that the mere application of a few doses of tuberculin, tubercle-bacilli emulsion or watery extract of tubercle bacilli does not complete what is called specific treatment. Not only must the action of the remedy and of the dosage employed be carefully watched, and changed as required by the altered condition of the patient, but the general hygienic and dietetic rules must be insisted upon and carried out just as faithfully. The patients must be

watched even more carefully than under general methods alone, and the daily, weekly and monthly variations in their condition must be fully considered.

The Purpose of Treatment

Whatever treatment of tuberculosis is adopted, it has the purpose of rendering the tubercle bacilli harmless and incapable of multiplication and of neutralizing their toxins, quite aside from the fact that the physical condition of the patient, as affected by the disease, must be attended to and that all annoying and disturbing factors must be met symptomatically. If the general resistance of the organism is sufficient to cause the production of antibacterial and antitoxic substances to lead to the desired result, specific treatment, is not needed. This is what actually occurs in the great majority of persons who become subject to tuberculous infection.

It has been demonstrated that at a conservative estimate at least 60 percent of all adults have at one time or another been infected by tubercle bacilli, but in most of them a progressive tuberculosis has not developed, since only about 12 percent of the population die of consumption. In the remaining 48 percent the natural resistance must evidently have been sufficient to arrest and heal the tuberculous process and to hold the tubercle bacilli harmless.

The Role of Nuclein

From a contribution by Ward of St. Louis (*Med. Record*, March 26, 1910) and from a study of the literature we are of the opinion that this natural resistance depends, at least to a considerable degree, upon the nuclein contained normally in the body-cells. Ward has shown that by the intravenous administration of nuclein there occurs not only a hyperleukocytosis, as had been described by Vaughan in 1894 and has since been verified frequently both here and abroad, but the number of red cells and the percentage of hemoglobin are increased.

Of 15 patients on whom he gives detailed reports, 9 were apparently cured, 4 were improved, and 2 died.

The administration of nuclein cannot strictly be considered as a specific method of treatment but must be explained rather as acting in the direction of increasing the natural organic resistance to harmful influences. By its twofold action, the hyperleukocytosis and the increase of red cells of and hemoglobin, nuclein meets two important indications. The first action is an antibacterial one and assists the body in destroying the harmful bacilli. The second action tends to alleviate the anemia which is an almost constant symptom of tuberculosis, and through this very fact it increases and improves the metabolism and function of the body-cells, thus enabling them to resist and overcome the injurious influence of the tuberculous toxins. More, by a stimulation of the general cell activity the process of repair is probably encouraged and the tuberculous lesions are arrested in their destructive process.

Years ago Professor Vaughan asserted that nuclein is an ideal remedy in tuberculosis. It is being employed and investigated largely, both here and abroad, and while the literature on the intravenous administration of the remedy, as proposed by Ward, is as yet very small, the writer is convinced that it presents many advantages over the oral and the hypodermic application, the first of which is uncertain in its effects, while the second is painful.

The writer hopes to have shown that the addition of specific remedies or of nuclein to the general methods of treatment are valuable in producing better and more lasting results. The careful physician is fully competent to employ either method, if he will take the trouble to study the problems involved, and the advantages accruing to his patients, and indirectly to himself, from the addition of these powerful remedies to the usual methods are immeasurable.



Intravenous Injections in Tuberculosis*

A Novel Method of Treating Pulmonary Consumption

By C. A. SHEPARD, M. D., Needles, California

THE method of treating tuberculosis by intravenous injection of tuberculin has not received the recognition I believe it should have. This method, perfected by Dr. Rothschild several years ago, while studying under Prof. Fraenkel in Berlin, and later used by him in San Francisco with such marked success, is, in my opinion, the most successful treatment we have at our command today.

Equally satisfactory results seem to be obtained from different preparations of tuberculin, i. e., the watery extract of tubercle bacilli, dried bacilli in emulsion, Koch's old tuberculin, but, as Dr. Trudeau of Saranac Lake has pointed out, as much depends upon the method of administration as upon the kind of tuberculin employed.

If there ever was a remedy that demanded therapeutic exactness it is tuberculin. Here we are dealing with a disease which is grave, and a remedy most powerful for good if administered rightly, powerful for evil if administered wrongly.

Artificial Immunization the Aim of Tuberculin Treatment

The specific treatment of tuberculosis with tuberculin is based upon the principle of artificial immunization. The exact rôle played by the antibodies, agglutinins, opsonins, etc., is as yet imperfectly understood, but we know that they are part of nature's plan to protect the body against bacterial invasion and action.

Hollister, says on the subject of bacterial vaccines: "There are four main resisting forces in the blood against bacteria and their toxins: bactericidal, bacteriolytic, agglutinating and phagocytic."

The organism has two ways of resisting invasion by microorganisms: (1) by the

specific action of the blood-serum, which may be natural or acquired; (2) by phagocytosis.

The blood has no bactericidal, bacteriolytic or agglutinating power on the streptococci, staphylococci and pneumococci, and while it has some agglutinating power on tubercle bacilli, it has no bactericidal or bacteriolytic power upon them. The organism, therefore, must depend almost entirely upon phagocytosis for its defense against the tubercle bacillus.

Now, it is well known that tuberculin markedly increases phagocytosis if given either subcutaneously or intravenously. But this phagocytosis becomes much more apparent when given intravenously and especially so when combined with atoxyl. Atoxyl has for years, and with great success, been used by the Germans, to produce this effect, in cases of anemia, of malaria and of sleeping sickness.

The Technic Employed

In using the intravenous method of administration we must be very careful that the solutions are absolutely sterile and that fresh solutions are used each time, care also being taken in regard to needles, syringe and site of injection in order to secure absolute asepsis.

As to the administration of remedy: I use a "Sub-Q" aseptic tuberculin syringe of 10 cubic centimeter capacity and graduated from 1 to 100, each division being 1-10 cubic centimeter, or 1 cubic decimeter. When using a 1-10 of 1 percent (0.1 p. c.) solution of tuberculin (TR), each division of the scale represents 1-100 milligram (0.01 mg.) of the preparation.

I fill the syringe to the 5 mark with a 15-percent sterilized solution of atoxyl, then introduce the desired amount of tuberculin, and then add sufficient of the atoxyl solution to bring it up to the 15 or 20 mark. One

*Read before the Riverside County Medical Society, Oct. 12, 1908.

Gram of a 15-percent solution of atoxyl would represent 0.12 to 0.15 Gram of this drug.

Koch and others have recommended and used much larger amounts, but have had to report loss of vision in consequence, in some cases. Those who have been using the smaller amounts have encountered no trouble.

The Technic of Injecting

Now as to the technic of the operation. I have the patient open and close his hand rapidly, for a few minutes, then I apply the elastic bandage above the elbow (this causes the veins in the hollow of the elbow to become prominent); after cleansing the site with alcohol I inject into one of these veins very slowly, withdrawing the syringe rapidly; then I loosen the bandage and elevate the arm for a few minutes and place over the site of injection a drop of colloidion.

Some have spoken of the danger of thrombosis in using an intravenous injection. I have given hundreds of injections, but never had this happen. I think if one is very careful and treats this strictly as a surgical operation there is no danger.

In using the intravenous method one avoids the local reaction, and being enabled to use much smaller doses, can avoid the general reaction while at the same time producing phagocytosis much more quickly than by the subcutaneous method. This has been proved conclusively by experiments conducted on guinea-pigs by Dr. F. M. Kelly of Needles, California, whose results will appear in *The Marine Hospital Bulletin* later on.

Avoiding Reaction the Fundamental Principle

In the therapeutic use of tuberculin the fundamental principle should be to avoid reaction. The best results are achieved when the amount of tuberculin used falls just short of producing a reaction, extending the treatment without attempting to shorten the time required, and increasing the dose carefully as immunity progresses.

The results are better and quicker if the injections are given when the patient has

no fever, so I generally have the patient go to bed and then commence treatment, but if after a few weeks' rest the temperature shows no tendency to go down I begin with about 1-100 milligram. After a little experience one can quickly learn how much tuberculin each patient will stand, and be governed accordingly.

It is a mistake to try to shorten the time of treatment by increasing the doses too rapidly or decreasing the intervals between injections. When full doses have been reached they should not be continued indefinitely for fear of exhausting the patient's power to respond to the stimulus of the injection of toxin with the formation of antibodies. It is well known that the horse's power to produce antitoxin can thus be exhausted; and when full doses can be reached, no matter how long it may have taken, it is better to discontinue treatment for about three months and then resume. The secondary courses of injections are so well tolerated that the patient can be carried to full doses very rapidly, often without any reaction at all.

Importance of Rest

I have spoken of rest in bed, and this is of vast importance in the treatment of tuberculosis. I know that my results are better in those cases in which I have been able to put them at absolute rest than in those that cannot be kept there for financial or other reasons.

Rest has a beneficial effect on the cough, dyspnea, fever and the heart. The heart has to bear the brunt of the fight in tuberculosis, owing to the enormous strain to overcome the resistance offered to the pulmonary circulation, while it shares also in the loss of muscular tissue; therefore rest more than any one thing will strengthen it at such a time. Any patient with a temperature of 100 degrees or more should remain in bed until this has been reduced, irrespective of how long it takes. Then there is the beneficial moral effect of an increase in weight which is obtained more rapidly by rest in bed. Nothing has a better effect on the mental condition of all patients who have

been losing weight than to be gaining; and with that we come to the question of diet.

Dietary Regimen of the Tuberculous

I do not believe in a fixed diet for tuberculous patients, because they are sick too long. It is much better to cater to their appetite and give them a varied diet, the food to consist especially of beef or mutton cooked rare, baked potatoes, boiled rice, boiled beets, fresh green vegetables, fresh fruits, fresh eggs, bread and lots of butter, milk, cream, cocoa, chocolate; but no tea, beer, wine or alcoholic drinks. They ought to take from one to eight eggs daily, and from one to four quarts of milk in addition. If milk disagrees they may use it in some modified form, such as Eskay's food or Horlick's malted milk, for instance. A well-nourished system is naturally more resistant than a system that is underfed, and a patient is more cheerful and more willing to carry out orders as soon as he notices a continued improvement in weight.

Fresh Air and Sunshine Paramount

The greatest possible amount of fresh air and sunshine that a patient can absorb in twenty-four hours is a valuable aid to any line of treatment, and in no other part of the country is it as easy to live outdoors the year round as it is here in southern California. I instruct my patients to be out, but sufficiently protected, whatever the weather, except in driving rain or dusty wind (sleeping out the year around if possible, but if circumstances or surroundings prevent and they are compelled to be inside, to have the windows and doors open); to have the sunniest and airiest room possible, and never to occupy a room heated by a hot-air furnace; no bed-fellow under any circumstances, and no room-mate if possible.

Case 1.—W. C. G., age 32, weight 125 pounds, no family history. Trouble commenced with hemorrhage in May, 1906; had been losing weight; much cough and expectoration. Examination of sputum showed presence of tubercle bacilli and large numbers of tissue-cells. Physical examination showed dulness over left apex and upper portion of middle lobe of left lung; rough

bronchial breathing and râles. Commenced treatment February 4, 1908, giving 1-20 mg. tuberculin and 15-percent solution of atoxyl. Ceased treatment in August, 1908. Weight now 156 pounds; no cough or expectoration; breathing a little harsh over the apex of the left lung. In excellent condition at the present time.

Case 2.—F. E. M., age 35, civil engineer, no hereditary taint, October, 1907, had an attack of pleurisy lasting three or four days; two days later hemoptysis. Examination of sputum showed tubercle bacilli present. Physical examination showed rough breathing in both apices and dry râles. Commenced treatment November 10. On February 4, sputum showed absence of bacilli and tissue-cells. Patient discharged cured May 4. Gain in weight 32 pounds; condition normal at present time.

Case 3.—H. U. G., residence Humboldt County, age 40, weight 128 pounds; previous history negative. Had pneumonia of left lung November, 1907; abscess in the same lung, January 5 expectorated one cupful of green pus. Physical examination showed marked consolidation over apex-lobe of left lung and of lower portion of right posterior; mucus and coarse râles; temperature 99° F., respiration 22, pulse 110. Examination of sputum showed tubercle bacilli, large number of streptococci, and some specimens of bacillus pyocyaneus, also tissue-cells. Commenced treatment November 6. The following May he was called home suddenly. Weight then 141 pounds; no cough excepting in the morning; expectorating one-sixth as much as he did on starting treatment.

Case 4.—J. H. C., New York, young man 20 years old. Father died of tuberculosis. Trouble started with grip followed by cough, expectoration, night-sweats and two attacks of hemoptysis. Patient was examined by Dr. Rochester of Buffalo, and declined treatment. Apices of both lungs badly affected, morning temperature 101° F. to 102° F., afternoon 103° to 104° F.; large cavity in left upper lobe; normal breathing in right middle and lower lobe. Patient sent to San Francisco June 1907,

put to bed for three months under the usual treatment; returned to Needles December, 1907. No fever, dyspnea or night-sweats; weight increased from 106 to 134 pounds. Has taken treatment since, with further gain in weight to 147 pounds. Was examined by Dr. Rochester in Buffalo in August last, and the change was pronounced "wonderful results" by the doctor. I quote this case as it is the most advanced one that has been treated with tuberculin and atoxyl, being in the beginning of the third stage, when results usually are practically *nil*.

I treated, last year, nine cases by the intravenous method; five of the patients are at work and free from symptoms at the present time; I do not know the present condition of one; three are still under treatment, and I have ten new cases this fall, all of which are responding nicely.

Now, you will see that the number of my cases is small and the time of observation short, but this is only intended as a preliminary report. I hope by this time next year to be able to report a great many more cases treated by this method. But these few cases and results confirm what Dr. Rothschild reported in a paper read before the county medical society of San Francisco, and the results obtained in many cases, I had the pleasure of seeing in his practice.

Just a word about the latent cases. We often have patients coming to us with slight cough, loss of weight, impaired appetite, and who will show a reaction to tuberculin, and yet examination of sputum shows absence of bacilli. This one thing (depending on the bacilli in the sputum) has in the past caused numerous errors in diagnosis and unnecessary delay in starting treatment. In every case the sputum should be examined, but yet too much dependence must not be placed upon results obtained—a case of pulmonary tuberculosis may show a negative sputum, just as a case of nephritis may show a negative urine. It is entirely possible to make a diagnosis of pulmonary tuberculosis before the condition is suspected by the patient or his association, and thus a greater responsibility is placed upon us to recognize these latent cases.

Any physician with patience and perseverance who will thoroughly acquaint himself with the disease, its physical signs, clinical course and pathology, who will study the remedy, gain a complete control of the patient, and proceed cautiously, using the intravenous method, together with forced feeding on a varied diet, fresh air, sunshine and rest, and having the patience to work and wait for results, cannot help but achieve success.

Postscript: I may be permitted to add here a few additional words regarding further experience since the foregoing was penned. This addition was written one and one-half years after the paper proper.

During the year just closed I have had under treatment 49 cases, with the following results: There were 14 cases in the incipient stage. In these all symptoms disappeared, and upon repeated examinations and tests no reactions could be produced nor bacilli found. Up to the present time all are in splendid condition. The length of treatment varied from three to nine months. Gain in weight, 11 to 40 pounds. Of 30 moderately advanced cases there were 20 apparently cured, 6 greatly improved, in 4 the disease was arrested, in 2 there was no improvement. Length of treatment, from six to twelve months. Of 5 third-stage cases 2 have died, in 1 the disease was arrested, 1 showed no improvement, 1 was greatly improved. A young man, 21 years old, is gaining so rapidly that I believe it is only a question of time and perseverance for him to make a good recovery, crippled, it is true, but able to live a comparatively useful life.

I think these results should teach us the value of having the disease recognized in the latent stage, to impress upon the general practitioner the importance of having their patients placed under treatment as quickly as possible to get the best results. It will usually be found that these patients are finicky eaters, that they tire easily, are below normal weight, are anemic, nervous and irritable, and have a tuberculous family history. A Moro test, or in case it fails, as it will do sometimes, an intravenous injection of from 1-10 to 1-5 milligram of

tuberculin, will usually show a definite reaction.

Until the general practitioner recognizes these early cases and can treat them himself, it behooves those who make a special study of the disease to appeal to the former for an earlier diagnosis and to send their patients in a curable stage.

The value of the *intravenous* method is that we can use about one-fourth of the amount of tuberculin required subcutaneously, to produce the same reaction and results, that the reaction appears sooner, the negative phase is shortened and the positive increased, as determined by the opsonic index, and that it is absolutely painless.

The Therapeutics of Pulmonary Tuberculosis

With Special Reference to the Use of Medicinal Agents

By GEORGE H. CANDLER, M. D., Chicago, Illinois

THE man attempting to cover, in such a brief article, the therapeutics of pulmonary tuberculosis must of necessity have either a very limited conception of his subject, or else entertain an exaggerated idea of his ability to present certain basal truths extracted from the great mass of material—practical or theoretical, chimerical or scientific—which has accumulated during the passing of the years. It is strange, indeed, in these days of "Tuberculosis Congresses," with profession, press and pulpit working shoulder to shoulder, to defeat this dread plague, to hear physicians grown gray in the harness and young men just beginning practice alike asking insistently, "What *is* the most effective treatment for phthisis pulmonalis?"

Of Cures there Are Many

From one direction comes the answer, "Fresh air and forced feeding," from another, "Tuberculin." One savant cynically affirms: "There is no drug or combination of drugs which will act directly upon the tuberculous process; the consumptive is doomed. It is your duty to isolate him, to disinfect the premises he has inhabited, and to expend your energy in preventing further spread of the disease." Another equally learned authority "begs to differ." It "appalls him to see such baseless assertions advanced!" The consumptive who would recover has but to "leave his home (where

ever it may be) and hie him to the pinewoods, the seashore, the Bermudas, or the mountains of New Mexico, and live out of doors—consuming meanwhile large quantities of fats—and a cure is but a matter of time." Still another erudite individual urges the use of the x-ray, oxygen inhalations, or, better, artificially produced ozone, and "systematized deep breathing," while "creosote internally and externally, with rest; large quantities of nutritious food, and an outdoor existence" is the "*one* successful treatment," according to one recent well-known writer. However, at the very same time a brochure appears in which another author urges doctors to relinquish both rest and creosote and to push mercury and arsenic, and keeping the patient "on the go" in the open. Even Bier's idea of localized hyperemia has been seized upon, as a possible cure for phthisis.

"Age does not wither" nor custom stale the "infinite variety" of cures for consumption, and, yet, today, as fifty or one hundred years ago, phthisis destroys more valuable lives than do any other two diseases of civilization. Since Jenner discovered vaccine and annihilated variola physicians have looked for some equally positive method of destruction for the tubercle bacilli.

The Story of Alabone

In 1877 one Edwin W. Alabone, M. D., F. R. M. S., M. R. C. S., of Lynton House,

Highbury Quadrant, London, England, startled the doctors of Great Britain by stating that he had cured, was curing, and could continue to cure "consumption" by giving to the afflicted a potion of lachesis, the homeopathic snake venom.

The profession scoffed—the consumptives believed, and Alabone, in a few years, was able to exhibit a list of "cured patients and patrons" several yards long. Lord bishops, right reverends, dukes, lords, and simple baronets swore that Alabone was curing phthisis. At least a hundred "reputable practitioners" attested to the same thing. The fame of the "Alabone cure" spread, and in Brussels Alabone was presented with the diploma, ribbon and decoration of the red cross, after having "cured beyond peradventure" several consumptive citizens of that burg.

Doctors in other countries adopted his methods and succeeded extraordinarily. Honors and wealth came to him from all over the earth; *but*—the Council of the R. C. S. derided the man and his methods and, after a long and bitter fight, expelled him from the college, dubbing him a quack and mountebank! Still the people who believed they had been phthisical and were now whole adhered to the man who had cured them, and in 1898 Dr. Alabone published the thirty-fourth edition (one hundred and forty-sixth thousand) of his book, "The Cure of Consumption," dedicating it to a fellow of the Royal Academy of Medicine and naming (by permission) several score of the best doctors in England as believers in, if not users of, his methods.

Surely, so much smoke could not arise without some fire. Every great discovery has been bitterly opposed; so thousands of educated people regarded Alabone's treatment as specific and the man himself a martyr-benefactor.

Today, who knows anything of Alabone—or, for that matter, where is the physician who would dream of treating phthisis with lachesis? Indeed, how many would care to depend upon the universally lauded tuberculins, whether Koch's or any of the still-later varieties? The various sera also come

—and go!—but the everyday doctor leaves them studiously alone and continues to ask, "What *is* the most rational method of treating phthisis pulmonalis?"

I am inclined to believe that if each man who asked that question could secure from a given treatment one-tenth the results Alabone and his followers obtained, he would unhesitatingly term it the *only* rational method.

The Mistake of Trying to Treat a Name

After all, it is not so difficult to treat the individual suffering from pulmonary tuberculosis, and, moreover, to treat him effectively. The moment we try to go further and aim to cure "phthisis"—the "named disease"—we are stumbling around in the slough of despond which, unhappily, has engulfed the majority of our great clinicians.

Alabone (and some before and after him) knew better than that: he dealt with the abnormal conditions present in the individual before him. He may not have "cured consumption" with lachesis; but he rectified every bodily wrong he could discover with the best remedies at his command. Proceeding along rational lines, he secured positive results.

The modern practitioner, infinitely better equipped in every way, should, by adopting similar methods, win even greater triumphs. He must, first of all, study, to the extent of his ability, the current literature on tuberculosis. Much of what he reads he should hasten to forget, but now and again he will discover a fundamental truth or receive a ray of light which will help him wonderfully.

Thus, for instance, the diligent student will learn that Wright gets results from the administration of very minute doses of tuberculin R, which are regulated by their effect upon the opsonic index, that is, upon the phagocytizing power of the patient's blood. He will feel inclined, thereafter, to raise the opsonic index of his own patients. He will learn that most tuberculous patients die either from profound sepsis or a desperate anemia. If, therefore, he can limit the production of toxins, improve the condition

of his patients' blood and insure its oxygenation, he *ought* to reduce the local mortality somewhat.

By degrees the intelligent doctor will find himself watching his people carefully for early signs of tuberculous taint. He himself will know—and will teach others—that the time to “cure consumption” is when it begins. He will, moreover, have an elastic treatment, and often may prescribe for A entirely different drugs than for B, even though both suffer from pulmonary tuberculosis. Now and again he will send a patient away to Colorado, Florida or the Bermudas; not, however, because he has phthisis, but because the conditions present in the individual at the time demand such a change of environment. Still, nine times out of ten he will teach his patients how to live—and get well—at home.

It is unnecessary for me to touch upon this phase of the subject here. Other and abler men are contributing papers outlining in detail the correct daily routine for the consumptive. These gentlemen will, probably, urge the necessity of elimination—intestinal, renal and dermic. They will point out the fact that a certain amount of bodily activity is necessary to insure reconstruction. The proper articles of diet; the proportion of proteids, carbohydrates, etc.; the correct apportioning of solids and fluids for an individual of given weight; all these and kindred important facts will be discussed by others. It remains for me to call attention to a certain rather limited list of remedial procedures each of which alone, and all of them in combination, have proven of extraordinary value in the average case of phthisis pulmonalis.

The Favorable Soil and the Invasion

The ordinary tuberculous patient suffers, first of all, from *autotoxemia*; it is safe to say that a certain lack of resistance (the “favorable soil”) must exist before the tubercle bacilli can gain lodgment and affect the system inimically. Once infected, the individual's system becomes charged with specific toxins; not infrequently we have to deal with a “mixed infection,” tubercle ba-

cilli, streptococci, staphylococci, diplococci pneumoniae, and various other microorganisms comprising the invading host. Fever and all the multitude of symptoms we are conversant with make their appearance. Assimilation is poor; the various organs suffer; metabolism is deranged; weak spots make themselves obnoxiously evident. The patient is in a bad way; and unless treated rationally is apt to grow rapidly worse.

To place such a patient upon any kind of “routine treatment for phthisis,” simply because tubercle bacilli are discovered in his sputum or the stethoscope reveals a consolidated area in the apex, is poor therapeutics, indeed.

The Rational Medicinal Procedure

First of all, empty the digestive tract of gross debris and inhibit intestinal fermentation. Open the pores of the skin and increase the output of waste. Cleanse the buccal and nasal cavities thoroughly; increase oxygenation of the blood-stream by deep inhalations of air containing antiseptic vapors; iodine destroys the pneumococcus; formalin inhibits bacterial development. Stimulate hepatic and renal activity. Produce a hyperleukocytosis. Supply the body-cells with the material necessary for repair. Meet all other disorders present in an intelligent way. These attended to, *the desired result is bound to follow!*

“If we could do all that,” I hear some doctor remark, “we should be magicians, not medicos. As a theory it sounds most beautiful, but in practice——?” Yet one single practical test will convince any competent physician that all this, and infinitely more, can be done any day and with almost any case. To facilitate procedures, I will attempt to outline what may be termed a line of basal medication.

A Basic Scheme of Treatment

1. Empty the digestive tract. Blue mass and soda, gr. 1-2; podophyllin, gr. 1-6; iridin, gr. 1-6, every thirty minutes for three hours in the evening. The next morning give a copious saline laxative draught. Repeat the procedure every third night for

nine days. Every second night flush the colon with warm decinormal salt solution, having it retained as long as possible. Give a light laxative on evenings when the mercurial is not taken.

2. To keep the intestines free from inimical bacteria and inhibit fermentation: The sulphocarbolates of sodium or of calcium, or both, with pancreatin and a bile salt one hour after food.

3. To increase the output of urea, and of body waste generally Boldine and iridin or stillingin before meals are indicated.

4. To increase the appetite and improve assimilation: Add juglandin, strychnine arsenate, nux vomica (or quinine) to the "before-meal" dose.

5. To increase resistance (leukocytosis) and render the system generally inimical to bacteria: Nuclein with guaiacol, calcium, and iodine. I have for some time been experimenting with various combinations of these drugs and find this formula to produce definite results, in eight out of ten cases: Nuclein, gtt. 10; guaiacol carbonate, gr. 1; calx iodata, gr. 1-2. One or two such doses may be given every three or four hours. More massive doses of nuclein are given hypodermically or intravenously. (Ward's method.)

6. To assist in the elimination of the solids and to flush the kidneys: Arbutin, barosmin, asparagin, or other indicated diuretics are the remedies, aided by thin barley water. Lithium or ammonium benzoate may be called for if hyperacidity or alkalinity of the urine obtains.

7. To secure normal excretion of waste through the skin: Employ sponge-baths of magnesium-sulphate solution (carbolated). The usual proportions are: magnesium sulphate, oz. 1; carbolic acid, gtt. 20; water at 100° F., 2 quarts. Repeat the sponging each night, following with brisk friction with rough towel.

8. To maintain cleanliness of the upper respiratory orifices. Gargle thoroughly and douche the nares with an effective alkaline antiseptic; then spray the nares with camphor and menthol in petrolatum. Eucalyptol may be added with advantage, or oil of cinnamon.

9. To destroy surface bacteria and to stimulate the mucosa of the bronchi. For this order inhalations of formalin vapor and steam bearing volatilized oils (turpentine, cinnamon, eucalyptus).

The phthisical patient treated along lines as here outlined *must* improve, for the simple reason that the pathologic conditions present are intelligently—and effectively—met.

If the diseased individual be placed upon a correct diet, spends most of his time in the sun and open air (properly protected), exercises or rests as his condition may demand, and thinks hopeful thoughts, he is doing about all he can do to get close to natural conditions.

The physician who can lead the victim of consumption thus far may safely be trusted to meet emergencies as they arise, and *he* at least will cease to inquire pathetically: "What is the most rational treatment for phthisis pulmonalis?"

THE greatest obstacle in the way of social and political progress is our lack of faith in the good intentions of our fellows.—
Golden Rule Jones.

A New Method of Treatment for Tuberculosis

By the Intravenous Injection of Nuclein

By **EDGAR P. WARD, M. D., St. Louis, Missouri**

Professor of Embryology and Clinical Medicine, Hippocratic College of Medicine

ONE of the great problems in the treatment of tuberculosis is to determine the best method of administering the remedial agents that may be indicated in a given case, and to ascertain, for a certainty, that they reach the tissues for which they are intended. On account of the greater or less uncertainty as to the fate of remedies administered by the mouth (owing to the impairment of the gastrointestinal system, which is present in all cases of tuberculosis) and to conserve the digestive energy, so as to provide for the taking care of the foods required for the nourishment of the general system, the oral route should not be taxed too heavily. Remedial agents given by the mouth only tend to place unnecessary work upon the digestive organs, thus impairing their utility.

Of the other methods for the giving of medicaments we are usually left to choose between two only. The first is the hypodermic method, by means of which readily soluble and non-irritating remedies are quickly and easily administered. In cases where large doses are not required, and in the hands of the average man, this is satisfactory, for one may be almost positive that sooner or later the remedial agent will be taken up by the circulatory system and distributed to the tissues of the body.

The second method is to give drugs intravenously. This assures the greatest certainty as to results. There is never any doubt that the medicament gets into the blood, for the physician puts it there himself, and, being so placed, it is promptly distributed to the tissues of the body in the exact form in which it is to be used. If we give the same remedial agent by the mouth we never know what chemical changes may take place through the action of the various digestive secretions, changes that may neu-

tralize or alter the character of the remedial agent to such an extent that it is impossible to get the results desired or expected.

We Must Stimulate Cell Activity

For several years I have taken the position that if we desire to remove or overcome a pathological condition, we must cease our futile attempts to neutralize the pathological condition by administering certain medicaments, and expect by this process of neutralization to "kill off" further pathological growth. We must rather apply or use such remedial agents as will stimulate the development and rapidly increase the number of the normal cells of the tissues of the body. If we have enough cells possessing full vitality, we need not worry about the pathological condition, for that will soon be gotten rid of if the condition be a remediable one. A pathological condition cannot exist in the presence of cells which are full of vital energy, for they are essentially antitoxic to the pathological process.

How then are we to reach these cells, and with what agents? What is more natural than to turn to the most important cells (when you consider their physiological function) in the body, i. e., the red blood-cells. These blood-cells carry to the various cells of the body that most essential of all elements, *oxygen*; and when they become incapable of function we die. What is more reasonable than that the body-cells will become diseased and die when deprived of this requisite amount of oxygen? Supply these cells with all the oxygen that they require and they will assume such a healthy growth that no pathological process or disease organism can exist in their presence; and this being accomplished the patient recovers.

Build your erythrocytes up to par, and you obtain wonderful results.

Now comes a most important question: "What remedy shall I use to accomplish this, and how?"

Personally, I have decided that question to my own satisfaction. I have been using a nuclein solution containing approximately six grains of sodium triticonucleinate to the ounce, standardized to one milligram of organic phosphorus to each cubic centimeter, in a normal-salt solution made up as follows:

Calcium chloride	0.25
Potassium chloride	0.10
Sodium chloride	9.00
Water	1000.00

I have been using this as a vehicle for the nuclein solution, for the reason that it conforms to the normal specific gravity of the blood.

Theory of Action

It has been heretofore considered that the giving of nuclein produces its good results chiefly by inducing leukocytosis. In my opinion the value of nuclein given intravenously depends not only upon this fact, but even more upon its up-building effects upon the erythrocytes and the hemoglobin. All other investigators have begun with the idea that the cure of tuberculosis depends, in great measure, on promoting leukocytosis. Now leukocytes, acting as phagocytes, can take care of the tubercle bacilli by surrounding and destroying them, just as they attempt to do with any other foreign body; but the tubercle bacilli of themselves are of minor importance. It is their effects which we must overcome.

Death occurs in tuberculosis from either (a) chronic sepsis from mixed infection, or (b) from profound anemia, which results from the action of toxins (or of the bacilli themselves, it may be) upon the erythrocytes, so diminishing the oxygen-carrying properties of the erythrocytes that the patient literally dies of oxygen-starvation. By combating the germs of sepsis, the nuclein-produced leukocytosis may reduce the danger from infection; but my experience impresses me more and more with the importance of the secondary anemia.

Now my records clearly show: first, that following the intravenous infusion of nuclein, the percentage of hemoglobin is markedly increased; second, that the number of red cells is decidedly increased; and third, that the specific gravity of the blood is almost uniformly brought up to, or near to, the normal. This is an important step in the treatment of tuberculosis, for it means that if patients can be given treatment before mixed infection occurs, the blood may easily be brought up to normal by this treatment, thus increasing tissue resistance.

My investigations thus far suggest the possibility of there being a nucleinic index of the blood, the exact rate for each individual varying in degree.

How the Nuclein Does Good

In the process of the development of the erythrocytes from the normoblasts of the red bone-marrow, the rapidity of the extrusion of the nuclei may be hastened or retarded by the amount of free nuclein in the blood (or if not nuclein then some unknown agent of like character) diminishing as the amount decreases and *vice versa*. If, then, the amount of nuclein be increased or the theoretical nucleinic index raised by the intravenous injection of nuclein, a problem of vast therapeutic importance is solved. All this, however, is purely theoretical. Yet as a practical result we do see exactly these results obtain, so whether or not the theory is a good one, we have the demonstration complete, in that its effects are just what is needed in the secondary anemias, even if not in the primary ones.

In the use of nuclein solution, intravenously, I begin with 20-drop doses, and as rapidly as circumstances will warrant increase the dose up to one dram every other day, all the time watching the effects upon the blood and regulating the dose and the frequency of it by the results obtained.

Results of the Nuclein Treatment

In eighty-six cases that I have records of, extending over a period of from six months to two and one-half years I have by this method of treatment obtained the following results:

Sixty cases have improved to such an extent that it is no longer possible to find tubercle bacilli in the sputum; the specific gravity of the blood has been raised to or near normal; and the number of red blood-cells has increased to or nearly to the normal number. This improvement had persisted from six months to nearly two years in some cases, and after all treatment has entirely ceased.

Fifteen are in practically the same state that they were after taking the treatment for a while; about all that can be said is that the nuclein has at least retarded the rapid progress of the disease. Eleven have died, the treatment having failed to even retard the progress of the malady. All of these cases are such as are seen in general practice; and many of them were beyond any hope when I first saw them.

The results of this treatment may be summed up as follows:

First. If there is not a net increase in the percentage of hemoglobin after two weeks' treatment, you cannot expect any permanent results.

Second. Even where there is no increase of hemoglobin, the treatment aids in keeping these patients on their feet.

Third. With a constant increase in the percentage of hemoglobin when the same has reached from 85 to 100 percent, with disappearance of the tubercle bacilli from the sputum and increase in the number of the erythrocytes to or near to the normal, this improvement persisting for one month after all treatment has ceased, the patient may be pronounced cured; but, of course, the physician must maintain a proper hygienic condition for a long time.

Meteorology in the Cure of Consumption

By ALBERT S. ASHMEAD, M. D., Canadensis, Pennsylvania

Director, Pocono Mountain Home

THE most favorable location for outdoor life of consumptives, in my opinion, is the Pocono Mountains of Pennsylvania, which are located at a more considerable distance from the sea coast than are the Adirondacks or Catskills. I am convinced that if we will select a place not too far back in the woods and within reach of milk, eggs, meat and poultry, we may have a reasonable expectation of securing good results in early cases of incipient tuberculosis in this region.

Hints As to Tent, Diet, and General Regimen

First, as to outfit, the best and most practical advice to give a patient would be to purchase a tent. A wall-tent is best, either round or square, it does not matter which, only so that it is readily ventilated. My belief is that any place where there is no malaria or any prevailing disease can be used advantageously in the cure of consumptives, provided the patient lives day and night out of doors, observes good habits,

consumes plenty of milk, eggs and beef-steak, and does not exercise when his temperature is above normal or when there is much disturbance of pulse or respiration.

We have learned a lot by this time about such matters and I myself learned a great deal, though my place in Pike County five years ago was merely a camp in the woods. A good, judicious caretaker is of inestimable help; but it must be one who has no dread of fresh air and especially of night air. The wall-tent is best provided with a fly; and a good floor should be supplied, not of rough boards but with regular rabbeted joinings. Good folding cots can be had for about \$3.00, and they are very important; only bear in mind that the sleeper needs a lot of clothing *under* as well as over him.

Chest exercise is valuable, but sometimes dangerous, so must be most cautiously used. The possibility of collapse of the lung from an opening into the pleural cavity is not to be lost sight of.

All consumptive camps as well as sanatoria should be accommodated with weather-bureau facilities. There is no doubt whatever that the outdoor method of treatment, in which such factors as sunlight and shadow, pure atmosphere, moderate exercise, rational feeding, and out-of-door pleasure are the principal ingredients, is the best method in the world for the cure of incipient consumption.

I do not think that altitude has much to do with the cure of the disease, excepting that up a mountain there are to be found the important meteorological agents more uniformly present, day and night, than at sea level. Yet, for instance, my friend, Dr. Kaurin, whose establishment in Norway is right on the north coast, at sea level, is obtaining as good a percentage of cures as those of others on higher altitudes. In Mexico, 400 miles south of the City of Mexico, there is a city of 30,000 people, called Oaxaca. Here there is no consumption at all. It is the resort for numbers of outside victims of the disease who go there to be cured. Oaxaca is situated at an altitude of 8000 feet. It is a prosperous mining city, where they never had a consumptive except when cases have been brought in from the outside.

There must be some precise conditions of atmosphere and sunlight or shadow which are more favorable to the destruction of the tubercle bacillus than are other measures, even in our best field of curatives. What are these? I myself have made comparison of weather-bureau observations with clinical observations on consumptive patients. The weather-bureau observations were kindly put at my disposal by the observer at the United States Weather Station at Pocono Lake.

Importance of Sunlight Doubted

While I have not had experience enough to draw accurate deductions, I am strongly inclined to believe that sunlight has not much to do with the establishment of a cure. Indeed, the very opposite seems to be a fact, for on cloudy days my patients were all much better than on sunny ones.

At Oaxaca, in the Mexican mountains, clouds frequently obscure the direct sunshine. Then, too, on the highest Andes, among the ancient races of the Aymarans and Incans, pulmonary tuberculosis was not a factor as much as was skin tuberculosis, or some other diseases due to congeners of the tubercle bacillus. The rarified air of those maximum altitudes increased chest development enormously, up to an expansion of as much as six and six and one-half inches. Eskimos do not contract tuberculosis if they remain in their own lands, nor do inhabitants of the north of Norway.

Then, how can sunshine be called a factor, except as it permits us *house-dwellers* to go out more in the fresh air? In the museum of Edinburg University there is a striking object lesson for our celebrated so-called lung specialists. Side by side there can be seen the lungs of an Eskimo, of a Londoner, and a coal miner. The Eskimo's lungs are pure white, the Londoner's lungs are dirty brown, and the coal miner's lungs are jet-black. Neither is tuberculous, to be sure, yet the Eskimo is shown to have kept his lungs *clean*, not because he knew more about *breathing* than the Londoner or the coal miner, but because he lived in a land of snowfields and spent his time in the open, germless and dustless air.

The Purity of the Air Breathed is the Thing

Our sanitariums of large cities and towns should measure in some exact fashion the composition of the air breathed; its purity is as necessary to the health of the inhabitants, as is that of the water supplied. Not one board of health cares about the air supply of communities. One thousand cubic inches might contain as many germs as could be contained in water, yet no cognizance is taken of it, unless some contagious disease has been in a house.

The air blowing into Dr. Kaurin's tuberculosis sanitarium at Molde, Norway, comes bracingly down the Baltic Sea. It is absolutely germless and dustless, hence, perhaps, its curative power.

The materials useful in a consumption camp are as follows: Standard and aneroid

barometers to measure the pressure of the air, and the character and amount of barometric changes going on in the camp from day to day.

The mercurial barometer, perhaps, would give the atmospheric pressure with that degree of precision required in simultaneous meteorologic observations. A barograph could give a continuous record of the barometric oscillations, hour by hour, upon a sheet of moving paper or by photographic processes upon sensitized plates. The barograph-clock should be in every consumptive camp.

An anemometer for indicating, measuring and automatically recording wind movement and direction is readily obtainable, and is very useful for finding out exactly which wind is best, in a given locality, for the cure of consumption. It is necessary to learn the velocity or force of the wind, not merely its direction. The standard anemometer with electrical registration is the best for our purpose, namely, the pressure of the wind as well as its velocity may be studied, also relation to the health of the patients of wind velocity and the pressure. A wind-vane, or anemoscope, also should be on the grounds for quickly showing the direction of the wind.

Gordon cells connected in series will operate single register instruments for wind velocity; or two magnet registers for wind velocity and sunshine, or wind velocity, sunshine and rainfall, on the same battery, with three cells instead of two. Four cells will operate a quadruple register: wind velocity, wind direction, sunshine, rainfall. Six cells will weigh and gauge rain and snowfall. Eight cells will record a telethermograph temperature at a distance.

For registration of sunshine a sunshine-recorder is necessary. There are three such: first, the Campbell-Stokes burning recorder, which consists of a ground and polished crystal sphere that acts as a lens or burning glass and scorches a trace, showing the *duration* of bright sunshine upon a strip of cardboard; then the Jordan, or photographic, recorder used by the Weather Bureau; and, third, the electrical thermo-

metric recorder, also used by the Weather Bureau.

These instruments, however, will not measure the brightness of sunshine, but only its duration and heat. These instruments will register a certain brightness of sunshine, but will not change from still brighter, or even the brightest sunshine, and the record remains blank for all degrees of intensity less than that which starts the record. Better and more complete methods of registration are now being devised; but as yet we could not exactly measure the sunshine required for the cure of consumption. Even these instruments will not exactly measure the time when the sun is covered with floating clouds or the exact instant when the sun disappears behind the cloud.

Value of the Solar Constant

The Weather Bureau has recently undertaken a series of special studies as to the value of the solar constant and its variations, by tests and intercomparisons of the Angström electric compensation pyrheliometer. The constant of this instrument is very carefully given by Knut Angström: the electrical resistance at 20° C. coefficient of variation of resistance with the temperature, and absorbing power of the band, according to the width of surface. The intensity of radiation is accurately determined, and the intensity of current in amperes. From the best data now available it seems that the solar constant is about 3.1 gram-calories per square centimeter per minute. Here, we see, is a large field for determining the exact conditions of sunlight or shadow that has virtue in the cure of consumption. Psychrometric studies include also vapor pressure, relative humidity, and temperature of the dew-point, and these are effects of solar radiation and withdrawal of heat. Vapor pressure over ice is vastly different from vapor pressure at high temperatures. Rainfall and snowfall should be measured, as atmospheric pressures are varied by both of these. Atmospheric pressure surely is an element in the open-air cure of consumption.

Comparative observations made by myself on the Pocono Mountains of Pennsyl-

vania showed, for July, that the lowest monthly mean temperature of the whole state was, at Pocono, 65.2° F. (Highest 87°, lowest 43.1°.) The total precipitation was 3.22 inches. (Greatest in 24 hours, 1.40 in.) There were seven days with 0.01 inch or more. Number of clear days, 20; number of partly cloudy days, 0; number of full cloudy days, 11. The prevailing wind was west, and it was of course dry.

During August the lowest monthly mean temperature of the whole state was equal to that at Pocono, viz., 62.6° F. The lowest temperature of the whole state was, also as at Pocono, on the 27th, 34° F. (Highest 84°, lowest 34°.) The total precipitation was 3.58 inches. (Greatest in 24 hours, 1.64 in.) There were eight days with 0.01 inch or more precipitation. Clear days were 20; partly cloudy days 4; cloudy days 7. The prevailing wind was west, and of course dry.

During September the lowest monthly mean temperature of the whole state was the same as at Pocono, viz., 57.4° F. (Highest 80°, lowest 24°.) The total precipitation was 4.79 inches. (Greatest in twenty-four hours, 1.80 in.) On seven days the precipitation was 0.01 or more inches. Clear days 17, partly cloudy 3, cloudy 9. Prevailing wind west, dry.

During October the lowest monthly mean temperature of the whole state was as at Pocono, 44.4° F. (Highest 73°, lowest 15°.) The total precipitation, 5 inches. Clear days 17; partly cloudy 1; full cloudy 13; prevailing wind west, dry.

What Makes Pocono so Healthful?

The climate, as may readily be seen, is an exceptionally dry one. The temperature ranges, from June 30 to October 20, from 34° to 65° F., the air therefore is quite cool. But what it is that makes the air

superbly curative for consumption has not yet been ascertained. Pure, germless air is the same here as everywhere, in midocean, for example, or at the north pole; but the radiant energy of something from somewhere and curative for lung trouble is certainly most intense here. What is it?

In a little modest camp with Swiss chalets, designs of which were kindly furnished me by the Swiss Minister at Washington, I obtained 81 percent of recoveries. The roofs of these shacks were especially adapted for protection from the drift of snows in winter time.

I have recently taken up this work again, and shall be happy to report further experiences in detail later on. My whole endeavor will be to study out what it is in the open-air treatment of consumption that produces the climate cure, when accompanied by strong proteid feeding with milk, eggs, and the administration of nuclein solution, with triple phosphates or arsenates of quinine, iron and strychnine.

In my treatment of leprosy I have used the nucleins for a long time, but for the purpose of producing abscesses on the bodies of lepers for my opsonic index work, on which I have prepared a discourse for the Bergen Leper Conference, on the invitation of Dr. H. P. Lie, the secretary general, which, owing to ill-health, I could not deliver, I always used yeast-culture cells, from which I made myself with sugar-ferments, each culture field being grown from a single bud.

For tuberculosis even this is not necessary; the manufactured nucleins will work independently of the vaccine principle and the dead bacilli. This air of the mountain itself acts as a phagocytosing body. There is no need to train the corpuscles in tuberculosis. In leprosy it is necessary.



Tuberculosis Treated with Crotalin

The Detailed Report of a Case Treated with this Remedy

By JAMES M. TISCHE, M. D., Wood Lake, Nebraska

I WISH to give you a report of one case covering twenty days of treatment with crotalin in which the failure is in no way due to crotalin but to the lack of a method as to how and when to give it. I would continue to use the remedy, were it not for the fact that the case is a stubborn one, and that it has long been neglected both hygienically as well as medicinally and now the common cry is, "For heaven's sake, do something."

A Resume of the Action of Crotalin

The following points are thoroughly impressed upon my mind:

1. Crotalin treatment improved the cough to a great extent.
2. Crotalin accelerated the pulse, temperature and breathing.
3. Crotalin did not have any effect on the night sweats.
4. Crotalin seemed to inhibit peristalsis more, the longer I used it.
5. Crotalin seemed to make the pulse small and wiry.
6. Crotalin at first took twenty-four hours to produce an effect, later only ten to twelve hours.
7. Crotalin internally, with hypodermic applications in addition, caused sickness, or nausea and vomiting.
8. Crotalin not only increased the evening temperature but kept the temperature high all day, while the morning temperature was noticeably lower.
9. I consider crotalin to have a cumulative action, as one-fourth the doses in the course of two weeks produced like and even more severe reactions than had occurred at first.
10. The apparent gain in weight I attribute to the confidence the patient had in the treatment.

Now these two facts I freely admit too: I used too much of it at the beginning, as

my idea of its action from what I had been able to gather from current literature was, that it was a fever reducer, but instead it acted as a fever producer; second, I did not use it long enough or could not get the consent of the patient and his friends to allow me to use same in "*dose enough*."

My idea is to use it in doses just large enough to obtain as slight a reaction as possible. In chronic coughs I would assign to it first place, with the above precaution.

In conjunction with crotalin I followed the general treatment as outlined by Dr. Waugh, in his scholarly article in *CLINICAL MEDICINE* for January, 1909. The patient has been sleeping in a window tent during the entire course of this treatment.

History of Patient

Mr. W. B., age 20, rancher, 5 feet 10 inches tall. Blonde. Mother's mother and sister died of consumption; patient's brother died of the same disease two years ago. Patient does not smoke, chew, or drink intoxicants. Has never spit up blood, but dried clots of blood have come from his nose mornings, although not frequently. Morning cough has been distressing and he then expectorates a tenacious lumpy mucus; in day time a slimy, frothy composition, which is now and then a little blood-streaked. Both apices and the right mammary region give blowing râles; in the axillary spaces there is pleural friction; breathing elsewhere over the lung surfaces is very obscure.

I first saw the patient in January, 1909, at which time he had a fever. His weight was 123½ pounds.

Daily Record

Dec. 30, 1909.—Temperature 99.6° F., pulse 106. Patient looking better than he has been doing. Weight 123½ pounds,

appetite very poor and he frequently vomits. At 3:52 p. m. gave 1-200 grain crotalin in back of left upper arm. At 4 p. m. he complained of slight aching. At 4 p. m. a lump the size of an egg appeared at point of injection and arm ached almost to the wrist joint. He had previously coughed incessantly; has not coughed so hard since he first complained of pain. At 4:52 p. m. temperature 100° F. At 8:52 p. m. temperature 100.8° F., pulse 97. Numbness and swelling of arm all gone, but seat of injection very sore and tender to touch, extending well up under the arm. The pulse now is more full and more wiry. Cough is absent, and patient feels livelier than he did last night.

Dec. 31, 1909, 10:22 a. m.—Temperature 99.6° F. Morning cough not so severe as usual; cough is looser and there is more expectoration. Appetite better than for two weeks back. Ate a very hearty breakfast. Pulse 95, full and strong, but weaker than the night before. Had slept soundly all night; did not awaken until 7:30 a. m. In excellent spirits. Swelling at the seat of injection all gone, tender only over immediate point of injection, stiffness all gone.

At 10:43 a. m. pulse 95, temperature 99.4° F., and there being little reaction left I gave a second injection of 1-200 grain crotalin in the other arm. Pain slight immediately after injection. At 11:02 pulse 86, more wiry. Patient has not coughed since injection. Temperature 100.6° F. Patient remarked that "This arm is not getting sore as fast as the other one was, the pain being located only over the puncture." Seat of injection for an inch in diameter red but no swelling.

At 11:43 a. m., pulse 90, losing its wiry edge; no cough; soreness spreading on the back of arm very slowly. At 11:43 a. m., pulse 90, same as before. Temperature 100.6° F. Patient had coughed several times. Breathing at night is easier, as the patient does not awaken feeling as if he were smothered. Respiration 16, free and easy. Stepping from a warm room into the cold had before provoked violent coughing and shortness of breath; this has not been so

this morning. Arm is sore to the elbow and almost to the shoulder, although there is no swelling of the arm. The out-of-doors temperature today is 100° F.

At 12:03 p. m., pulse 88, losing its wiry feel. Temperature 101° F., patient has coughed a little more frequently and the cough is looser. At 12:23 p. m., temperature 100.4° F. Respiration 18. Pulse 88. Arm about the same; sorest over point of injection; no swelling, numbness or stiffness. Patient coughs about once per minute, cough is dry and high pitched, with a hoarse sound. At 12:30 patient felt a little chilly, but he has felt so for months, at about this time of the day.

January 1, 1910.—Aching all over lower half of body from hips down, chilly feeling at noon the same as ever. Appetite very good, only coughed three or four times all morning. Since dinner has coughed hard. Left arm swollen quite badly and red in the morning; at 2 p. m. it is red and sore, and hot to the touch. Respiration 19, full and easy, temperature 102° F.; pulse 114. Added triple arsenates with nuclein to the treatment.

January 2, 1910, 3:15 p. m.—Pulse 104, quick and soft. Temperature 102° F. Respiration 21, full and free, no aching or pain since last record. Slept well all night, sweated very little; appetite has been improving since the first injection. Chilly feeling was felt more from 11 a. m. to about 1 p. m. At latter hour patient began to feel better again. Right arm is still quite tender, left arm where first injection was made is about free from pain. Cough easy yesterday p. m., more troublesome this morning, cough not as hard as it has been the past two weeks before the first injection. Patient is in good spirits; feels better today than at any time. Color good, cheeks pink for the first time since I have known him, i. e., in one year. Finger-nails pink, skin apparently normal to the touch, and pink. Bowels and urine normal, before and since injections began; possibly more free since the injections began. Patient stated that he was hungry before meals for the first time in months.

At 3:35 I gave an injection of 1-100 grain of crotalin three fingers' width below injection No. 1. The arm was discolored a faint yellow green from injection, for a space one inch in diameter. The fits of coughing on going out of doors have been milder since injections than before. At 4:05 p. m., respiration 20, temperature 101.6° F., pulse 100. Arm is tender as far as the elbow, the muscle above the last injection is quite sore, but there is no numbness or stiffness. At 4:35 p. m.: Respiration 19, pulse 98, temperature 102° F. Left elbow is stiff; upper arm very tender and hot. Patient seems flushed; elbow and arm much more tender and sore than after former injections. At 5:35 p. m.: Respiration 19. Pulse 102, small and wiry, very quick. Temperature 101.6° F. Arm is stiff and painful. Patient cannot bend the elbow. Cough for the same time of observation very much less.

Improvement in general appearance since first injection commented upon by all observers. The patient is looking better, feeling better, and has a better color; arm hurts more than from the other two injections together. Eyes appear well, lips pink and normal, but ears are still waxy in appearance. Since first injection the former continual tickling in the throat is fast disappearing and a soreness seems to have taken its place. Expectoration is more profuse now in the morning. Daily expectoration about the same, which is very scanty. Morning cough is more loose, but not so severe. Chest expansion 32 to 35½ against 32½ to 35 last October. Expansion does not provoke coughing as before. The excessive thirst has left the patient.

At 8:45 p. m.: Respiration 19. Pulse 100, full and strong. Temperature 101° F. Cough since last record very slight. Arm aches at the elbow, shoulder is stiff and there is pain in the axilla. Pain in lower arm only when hand is held on the knee and kept in one position for some little time. Finger joints seem a little more stiff than those of the other hand. Color of skin is pink and the ears are a trifle more pink than usual. Ate a very hearty supper. Arm between

elbow and shoulder very sore and tender, clothes feel as if they were stuck to it, but there is no swelling. Voice has become husky in the last hour.

[EDITORIAL NOTE.—Following this, Dr. Tische gives a further record of the patient's symptoms, equally careful and complete, covering the period from January 3 to January 22. There were alternating periods of improvement and loss. Thus, on January 3 there was a purplish appearance, and the finger-nails were dark, color improving later in day, with rise of temperature.

Temperature varied widely during this period, ranging from slightly above 96 (sub-normal) to 104° F. Pulse ranged around the 100-mark most of the time, generally somewhat above this, and usually small and wiry, occasionally weak and dicrotic. Respirations ranged from 17 to 26. There were occasional chilly spells and some night sweats. The injections caused considerable pain and were always followed by swelling and tenderness of varying degrees of intensity. Cough generally improved; fewer paroxysms on exertion and less disturbance of sleep. On January 7 the patient said: "I have felt better today, straight through, than any day since I have been in town." January 9 he "took cold" and cough became more severe with soreness under the sternum. This condition ameliorated within the next few days. January 2 he weighed 125 pounds; January 10 weight was 128½; January 13, 130½; January 18, 127½, and January 20, 128½ pounds.

Up to this time, while the variation in the condition of the patient does not seem to have been great, there was apparently real improvement. On January 10 Dr. Tische decided that the doses of crotalin were too large and thereafter gave 1-400 grain. The arm was more swollen after this injection, January 12, but was not painful. During these injections a troublesome rash developed on the arms. January 15 pulse was 87, and the best taken during the illness. Crotalin was tried internally, late in the treatment, but caused nausea. From January 20, Dr. Tische reports as follows.]

Jan. 21, 1910.—Slept well, perspired freely, after which sleep was less good. Chilly spell from 11:30 a. m. to 1 p. m. Cough light and loose. Throat quite sore. Fingernails turned blue. Appearance generally only fair, appetite poor. Respiration 17. Pulse 95, good volume and soft. Temperature 101.2° F. Arm does not bother today.

Jan 22, 1901.—Slept poorly, felt bad generally. Chilled all morning. Temperature 1 p. m., 104.2° F. Cough was very light.

Since preparing the above, my patient has grown worse, after a decided change for the

better under mercury succinimide, treatment up to February 21, 1910. A rapid rise of temperature February 21, 1910: 12 m. 97.3° F., 1 p. m. 101.2° F. and at 3 p. m. 104.1° F. His weight today is 123, the lightest since treatment began. The internal treatment I was compelled to cut out entirely as his stomach would not retain it. Bowels are hard to move.

Diet: very raw steak, raw eggs, fresh milk, fruits and new vegetables. With all of this temperature the patient is up and about and very cheerful.

The Value of Nitroglycerin in the Prevention of Hemoptysis*

A Study of the Etiology of the Condition, with Therapeutic Deductions

By **FREDERICK S. MINNS, M. B., Toronto, Canada**

Late Resident Physician to the Toronto Free Hospital and King Edward Sanatorium, Weston, Ontario

THERE is no symptom, nor complication in pulmonary tuberculosis which causes so much alarm to the patient and anxiety to the attending physician as hemoptysis. No matter how scanty the hemorrhage may be, it is not to be regarded lightly. In the vast majority of cases a recurrence is to be expected. And if it be at all profuse the possibility of death from suffocation, from subsequent exhaustion, or from bronchopneumonia is never to be disregarded.

The frequency of this complication may be said to be about 60 percent of all cases. Varying estimates are given by different authorities, ranging from 25 to 80 percent. Of one hundred consecutive cases admitted to the Toronto Free Hospital previous to May 1, 1908, the records show a percentage of 47.

A common observation in connection with the occurrence of hemoptysis in institutions has been that they do not often occur as isolated cases.

Etiologic Factors in Hemoptysis

The general rule is that they appear, as it were, in epidemics. This has suggested that some common factor is a causative agent, and different authorities and investigators have suggested as this common factor (1) the presence of mixed infection, or (2) atmospheric changes.

In regard to mixed infection, all that can be said as the result of the investigations that have been made is that in a certain percentage of cases of hemoptysis mixed infection has been found. In no case, however, has it as yet been proven to be a causative agent, nor have the advocates of this theory given any explanation which adequately covers those cases in which mixed infection is present over long periods without hemoptysis. Nor does any such theory explain why as high a percentage as fifty of all cases of pulmonary tuberculosis never have hemoptysis.

In regard to atmospheric changes, it has been the observation of the writer that hemoptyses have usually occurred in groups of from three to ten. As a matter of fact, out

*Condensed from an article appearing in *The Canadian Practitioner and Review*.

of one hundred consecutive hemoptyses⁷ only five occurred as isolated cases. They have generally occurred when the barometric pressure was extremely low or high, or following rapid changes from one extreme to the other; when the degree of humidity was great; when the amount of precipitation was large; and when the wind was of high velocity, and frequently from an easterly direction.

For example, in May, 1908, hemoptysis occurred at the Toronto Free Hospital for Consumptives on the seventh (8 cases), the fifteenth (1 case), the sixteenth (2 cases), the thirtieth (1 case), and the thirty-first (1 case)

Meteorologic Factors

Each of the foregoing cases corresponds with significant atmospheric conditions. For on looking over the records of the Meteorological Station, Toronto, which were very kindly placed at our disposal by Mr. R. F. Stupart, Director, we find: On the seventh the degree of humidity great, the amount of precipitation large, the barometric pressure falling, and an east wind of the highest velocity for the month.

On the fifteenth and sixteenth we find the degree of humidity great, and an east wind of high velocity.

On the thirtieth and thirty-first we find the degree of humidity great, the largest amount of precipitation for the month, and a variable wind shifting from east to west.

In January, 1909, hemoptysis occurred on the seventh (1 case), the seventeenth (7 cases), the eighteenth (2 cases), the nineteenth (2 cases), the twentieth (1 case), the twenty-second (1 case), the twenty-sixth (1 case), the twenty-seventh (1 case), the twenty-eighth (2 cases), the twenty-ninth (2 cases), the thirty-first (1 case).

On the seventh we find the highest barometric pressure for the month immediately following a low pressure—a rise of 0.85 in the minimum pressure, and a great degree of humidity.

On the seventeenth we find a rapid fall of barometric pressure, the second-largest amount of precipitation for the month, preceded on the sixteenth by a northeast wind of very high velocity.

On the eighteenth and nineteenth we find a rapid change from high to low barometric pressure, and a great degree of humidity.

On the twenty-second the hemoptysis was due to overexertion.

From the twenty-sixth to the thirty-first we find rapid changes of barometric pressure. We find the lowest pressure and the highest velocity of the wind for the month on the twenty-ninth. We also find a very high degree of humidity, and precipitation the largest for the month on the twenty-ninth, with north and east winds of fairly high velocity.

Unless these cases are to be considered as mere coincidences, they must be regarded as showing in this connection that great or rapid changes in atmospheric conditions are associated with the incidence of hemoptysis. And the explanation would seem to be that, while in health rapid changes have an appreciable but not serious effect because the body through the nervous system is able to accommodate itself to the changed conditions, in disease this power of accommodation is lacking and equilibrium is suddenly disturbed.

Blood-Pressure Plays an Important Part

Whatever may be the exciting cause of the hemorrhage, it seems reasonable to suppose that the blood-pressure in the pulmonary area plays an important part in its production. About blood-pressure in the lesser circulation, either in health or disease, very little is known. Janeway, however, says:

"In the lesser circulation, as is well known, much lower pressures obtain, since this is true for the right ventricle as compared with the left. The direct estimation of blood-pressure in the pulmonary artery is very difficult, without producing markedly abnormal conditions. The best experiments by Bentner, Lichtheim, Bradford and Dean, and Knoll have shown values, as compared with the aortic pressure, between 1:2.6 and 1:13.4. These were in the rabbit, dog and cat. In all probability it does not average more than one-fifth the height of mean aortic pressure."

Of one hundred patients studied by Naumann, in sixty-nine the blood-pressure was

over 130 mm. (G.). In thirteen the blood-pressure was 115 to 130 mm. (G.). In eighteen the blood-pressure was under 115 mm. (G.). Naumann considers these high, normal, and subnormal values.

It does not seem possible, however, to assign any limits of blood-pressure as being the normal condition found in pulmonary tuberculosis.

The following are the results of 50 cases taken at random from patients in residence at the Toronto Free Hospital for Consumptives: In six the blood-pressure was over 130 mm. (G.). In twenty-one the blood-pressure was 115 to 130 mm. (G.). In thirteen the blood-pressure was under 115 mm. (G.).

The following are like readings from (8) individuals apparently in good health: In one the blood-pressure was over 130 mm. (G.). In five the blood-pressure was 115 to 130 mm. (G.). In two the blood-pressure was under 115 mm. (G.).

These records show a wide range and demonstrate that the personal element is much stronger than any due to the disease.

Whatever may be the normal pressure in the pulmonary area in any particular patient suffering from pulmonary tuberculosis, it is evident that if hemoptysis is to occur, a point must be reached at which the pressure is too great for some particular vessel to withstand. And when it is remembered that in pulmonary tuberculosis the vessel from which a hemorrhage takes place is probably one weakened by the progress of the disease-process, it is not necessary that the pressure in that particular area be even higher than normal. It is evident, also, that the strain on a particular vessel wall may be altered by a change in the pressure either within or without the vessel. And if hemoptysis is to be prevented it is necessary, since the pressure outside the vessel wall is not under control, to endeavor, if possible, to keep the pressure within the vessel considerably below the danger point.

Suggestions for the Prevention of Hemoptysis

Much has been written and many suggestions made in regard to the treatment, im-

mediate and subsequent, in the case of hemoptysis, but very little, if anything, has been done along the line of its prevention. It will readily be seen that this is a subject of some value, significance and interest.

Many authorities claim that it is impossible to maintain permanently a reduction of pressure in the pulmonary area by means of any therapeutic agent. This, however, is a statement which cannot very well be proven, since no experimental observations of blood-pressure in the pulmonary area have been made without the production of conditions far removed from the normal. Clinical observations, however, go to show that increase of pressure in the systemic area produces an accompanying increase in the pulmonary area.

This is evidenced by the occurrence of isolated cases of hemoptysis due to physical exertion, emotional excitement, or mental disturbance, in all of which cases we find an increase in the systemic pressure. Conversely, it is reasonable to suppose that a reduction in the systemic pressure would be accompanied by a reduction in the pulmonary pressure, and that therefore hemorrhagic cases with a blood-pressure perilously near the danger point might be placed in a position of comparative safety if the maximum pressure in the pulmonary area could be lowered sufficiently to allow a working margin without the danger point being reached.

One of the most useful therapeutic agents capable of producing such a result seems to be nitroglycerin.

How Nitroglycerin Acts

The action of nitroglycerin is described as follows by Cushny:

"The flushing and dilatation of the arterioles of the head is found to be accompanied and followed by a profound fall in the blood-pressure. The heart is accelerated at the same time, and seems not to be responsible for the change. The cause, as has been repeatedly demonstrated, is the dilatation of the peripheral vessels, both arterioles and veins widening under the influence of the drug; the vessels of the abdominal organs

and the head are more affected than those of the extremities.

It is generally considered that nitroglycerin is extremely poisonous, and therefore it is given in exceedingly minute doses. With this precaution, however, it can be given over long periods without any apparent injurious effects. For example, 1-100 of a grain may be given four times a day for weeks, or 1-400 of a grain may be given for months.

The following routine treatment of hemoptysis, including nitroglycerin, has been found very efficacious:

At the time of hemoptysis: Morphine sulphate, gr. 1-4, hypodermically, only if the hemorrhage is profuse, or in case of extreme nervousness. Absolute rest, both of mind and body. No talking. Semirecumbent position. Chipped ice, salt, or snow. The following are also sometimes of value: Aconitine, gr. 1-200; atropine, gr. 1-50 to gr. 1-25; amyl nitrite, m. 5. Ligation of the extremities.

During subsequent forty-eight hours: Nitroglycerin, gr. 1-100, q. q. h., by mouth. Calcium chloride, gr. 20. q. q. h., for three days only; or the lactate. Purgative, calomel, grs. 2. Sod. bicarb. grs. 5. Saline. Absolute rest in semirecumbent position. Diet, cold milk, gelatin.

During remainder of first two weeks: Nitroglycerin, as before. Rest. Saline quotid., a. m., a. c. Diet, light.

After the first two weeks: Nitroglycerin, gr. 1-400, q. q. h. Laxative, if necessary.

A brief history of one of several cases which have been treated with using nitroglycerin as a preventive may be of interest.

Some Case-Reports

Case 1. Male, age 30, white, clerk, marked debility, cough troublesome in the evening, with about two ounces of expectoration, poor sleeper, appetite fair, bowels constipated. Temperature, 100.2° F., pulse 120, respirations 28. Weight 146—a loss of 14 pounds since August, 1907.

"Always had a cough." For past two years had enjoyed best health, to his recollection. Caught cold November, 1907. Had

the grip for two weeks, followed by sciatica for six weeks. From the beginning of 1908 until admission in March he was under the care of his physician for recurring hemoptyses, having had 18 or more in all.

Treatment and progress. Admitted March 13, 1908. March 14, 1908: Nitroglycerin, gr. 1-100, q. q. h. Mist. mag. sulph., one ounce, t. i. d., a. c. March 15. Color in sputum. March 19: Color in sputum. March 23. Hemoptysis, quantity measurable in ounces. March 25: Hemoptysis, quantity measurable in ounces. March 30. Slight hemoptysis, quantity measurable in drams.

The same treatment was continued, except that on July 10 the dose of nitroglycerin was reduced to 1-400 grain. No more signs of blood appeared. Patient left institution in December. Has been at work since the beginning of January, 1909, and has continued the treatment. No more hemoptyses.

Of the eight cases which had hemoptysis on the 7th of May, 1908 there were four in residence on January 31, 1909.

One of these, who had a previous history of over twenty hemoptyses during the years 1902, 1906, 1907 and 1908, had continued taking 1-400 grain of nitroglycerin four times a day, and only on one occasion has had a trace of color.

Summary

1. While there may be other elements in the production of hemoptysis, it is evident that blood-pressure in the pulmonary area plays an important part.

2. Estimation of blood-pressure in the pulmonary area cannot ordinarily be made experimentally.

3. Clinical observation, however, goes to show that there is a relation between pulmonary pressure and systemic pressure.

4. Such preparations as nitroglycerin are capable of reducing blood-pressure in the vascular system, and by their use it would seem to be possible to keep the pressure in the pulmonary area in any particular case reasonably below the danger point.

5. The drug should be administered in small doses, and may be continued over long periods.

6. The results obtained here have been the result of the study of over six hundred cases of pulmonary tuberculosis in residence, and the treatment as carried out for nearly two years has given time to prove the efficiency of the same.

7. It would seem to be indicated that this drug should be administered in the morning some time before the hour of rising, and subsequently at, say, 7:30 a. m., 11:30 a. m., 4:30 p. m., and 7:30 p. m., in order to have the result produced before the blood-pressure is raised by the exertion incident to toilet, meals, etc.

8. When 1-100 grain of nitroglycerin will reduce the blood-pressure 15 mm. in less than ten minutes, the same dose, given

four times a day for, say, two weeks, should be sufficient to maintain a lower pressure than the individual's normal.

9. While the administration of nitroglycerin has not proven to be an absolute preventive, still, in the large majority of cases, with a previous history of hemoptysis, or the occurrence of the same while in residence here, it has been clearly proven to be efficacious in reducing the frequency of the complication and in lessening the amount of blood lost when it does occur.

To Dr. W. J. Dobbie, physician-in-chief of the hospitals for advanced tuberculosis at Weston, the gratitude of the writer is extended for his courtesy and assistance, and in providing free access to the records and other data that have made this article possible.

The Trend of Modern Medicine

A Study of Therapeutic Evolution

By J. WILLIAM WATSON, A. M., M. D., South Braintree, Mass.

EVERY medical student at one time or another in his lectures on therapeutics is told that in the first few years of his practice he will use a great many drugs, but after a while he will sift them down to a few definite principles; and these he will use the rest of his life, making the number fewer and fewer as the years go on.

To illustrate: Some three years ago I was living in a town where there were two physicians of the same name, one young and lately started in practice, and the other with nearly a quarter of a century of experience behind him. I had been ill for several days with a diarrhea, when, on a Sunday morning, just after tasting of food, I was taken with cramps, vomiting and purging. I was hustled to bed in great agony, and my wife by mistake called in the young doctor, who told me to take a grain of calomel in divided doses, follow this with saline laxative, and then take a diarrhea

compound. I felt that I had all the physicking that I needed, and I did not relish the idea. So my wife called in the older physician of the same name, and the one that I wanted. He gave directions to rest completely, and left a small tablet to be taken every three or four hours. Notice, only one drug was given, and all the rest was talk or advice. This surprised my wife, for she had seen me follow the first course so many times.

The patient made a good recovery and had plenty of food for thought.

Many Recover Without a Physician

I said "talk or advice." In a medical school not far from that in which I was educated one of the professors used to tell his students that "half of the people"—"yes," he said, "I will make it three-fourths of the people, when they become ill, never call in a physician; and yet they get well. The

other fourth call in a physician, and one-half of these get well, in spite of the physicians and their drugs. The very presence of the physician and the confidence he inspires does a vast amount in making a patient well, with the help of good Mother Nature."

I know of one old lady (the salt of the earth) with whom her physician at her request used to invoke the blessing and aid of the Great Physician. This did her more good than the medicine, and it is a thing I believe that every physician should be able to do upon request (only). It is valuable, as it acts decidedly upon the subconscious personality, which is the great healing power within ourselves and is almost wholly unknown to us.

In my early medical education my professor of physiology, while lecturing on digestion, said that more attention ought to be paid to food by physicians and less to drugs. And there he stopped, and so it is in most of our medical schools, the subject is just mentioned and that is all. We are left to do our own thinking. If we want to give our patient iron we are not told to feed them on such things as asparagus, pears, lettuce, peas, beans, and potatoes, which are all rich in iron in the most assimilable form and furnishing nourishment at the same time.

Growth of Drugless Healing

Apropos of this, the editorial on "The 'No-drug' advice of Woods Hutchinson" in the March number of *CLINICAL MEDICINE* is interesting. Not very long ago there appeared in several journals an article on "Drugless Healing vs. Medicine in the United States;" this was reprinted in full in *CLINICAL MEDICINE*, which we are glad to see takes note of the latest discoveries of vital importance to physicians. For years now this matter has been agitating the profession. For the last three years I have observed it carefully. And here is where the idea of evolution comes in—in trying to find that (no matter what the source) which will do the patient the most good.

I practised some three years with the galenicals, which were taught me in my

medical preparation. Then followed a study of the alkaloids, which I still cling to, together with a closer study of the cause of disease. For the last three years I have looked into hygiene very carefully, especially of the digestive tract.

My attention was drawn to this by the oft-repeated suggestion of *THE CLINIC* "to clean out and keep clean," and make the intestines antiseptic. I wondered if there was not some other way than by taking so much physic to accomplish the same end. It did not seem to me that it was necessary to take so much physic. By correct methods of eating I decided that this could be accomplished, as that a great many chronic diseases could be helped and perhaps cured in the same manner.

I do not believe in absolutely no drugs, but in the use of fewer drugs. Not so much in "good advice," as in *actual help* both for the present and for the future. Every physician knows that certain hygienic methods have to be followed in order to get the best results from the medicine he gives. Why not go into the hygiene more, and study up, for example, the value of water, which often forms a component part of the medicines that we give?

Much is being written on the various creeds and pathies of the treatment of the sick, and many people are interested in them, simply because the regular physician fails to make good, while the pathies are often successful in these same cases. It is valuable, therefore, to see wherein their success lies.

The No-Breakfast Plan

The no-breakfast people are successful in a certain number of cases, because the supply of food is cut down. It is a well-known fact that the American people are great eaters, "guzzlers." No doubt many of the sudden deaths due to supposed heart disease are really cases of indigestion. If the amount of food is lessened, there will be less fermentation in the bowels. But the no-breakfast plan alone will not cure all disease, as its devotees claim. With less eating the food must be regulated to fit the case in hand. In this respect the layman

not able to regulate his diet, and here is where the studious physician should step in and recommend the proper food to suit the patient and his needs. Along this line might be included the fasting idea supposed by many to be the great cure for human ills. Stop feeding the disease entirely, and the patient with proper medication will get well. No doubt that there is a great deal of common sense in this idea, and we have frequent examples of fasting furnished for us in Holy Writ.

It is a well-known fact that we all have within us an inherent power, called immunity, that resists disease. The better the blood, the greater is the immunity. If the blood is not acting on decaying food it is purifying the body. It has been stated that the fasting person can not catch disease, because his blood has a higher resisting power. No doubt that there are times when it is not wise for us to force our patients to eat, for in so doing we abuse them by our supposed kindness.

We have often assured our fever patient that he can not catch cold when he has a fever, but it does not seem to occur to us that the blood while fighting to rid the body from the fever is in no condition to aid the stomach in the digestion of food, which when forced upon the patient, as we often do, to "keep the strength up," is apt to produce more fever. Behold, how long some of our typhoid-fever cases linger. Is it because we feed them by urging them to drink milk, which on a hot summer day will soon sour? It finds worse than dog-day weather when it reaches the nonsecreting stomach of a fever patient, having a temperature of 102° F. or more, and because of impaired digestion produces a continuance of the fever and the bad stools. Here is where the no-drug man in his fasting method gets ahead of the profession; but I think that we shall get away ahead of him by adding to the fasting very small doses of aconitine in four ounces of hot water, hourly repeated.

What the "Water-Cure" and Christian Science Accomplish

The water-cure people have some good ideas, and not all advice either. They give

their patients help very quickly. I have seen patients vomiting, purging, in severe stomach and abdominal cramps, and pains relieved almost instantly by the judicious presentation of hot and cold (not ice) water. A great many people dislike any opiate, and so when the no-drug man comes along and relieves them in this way without any of the unpleasant after-effects of an opiate, they are ready to listen to what good advice he may give them in order to prevent future attacks of a similar nature.

I can not say much for or recommend Eddyism. It is called Christian science (a good name thereby spoiled), but it is not anything but Eddyism, a despotism, a jumble. I believe that nearly every up-to-date physician believes in Christ. A careful examination of His work shows that He was a man of science. He was a great exponent of drugless healing. His science was nothing else but *Christian*. We can not help but believe in His science, hence, therefore, we believe in Christ science. He anointed the blind man with clay (we use it to make antiphlogistine) mixed up with saliva (which by the way has been found to have great antiseptic properties, sufficient to kill the germs of diphtheria and cholera morbus), which indicates that he probably used some drugs. He conformed to the customs, and one of his closest followers was a man of our cult. The Eddyites do not use drugs, and their rule is to get rid of the physician so that God will have a better chance to get in His perfect work.

Not so with real Christ science, the science taught us by Jesus Christ, for it does not hesitate to use drugs nor does it hesitate to work with physicians. It works and acts on the subconscious mind in a mysterious way, and this is where mental science, faith-healing, and perhaps Emmanuel healing have their power. The basic principle is found in faith in God and prayer. Every true physician in hours of need turns, as did President Lincoln, unconsciously to these great weapons, and afterward he wonders how that very sick patient got well. At present we can send messages without wires and save life. Why cannot we save

life by thought transference and heal with the aid of the Deity? This may seem a little fanciful, but it is worthy of consideration as there is evidence extant proving some remarkable cases of healing, which our finite minds can not account for in any other way.

Other Drugless Methods

I have seen osteopathy limber up joints and calm the pains of rheumatism. I have seen the osteopath use drugs (and also at my recommendation), but he uses massage more. With a good manual and vibrator the regular physician could attain the same results. It has been my good fortune to soothe sciatica by these methods. The osteopath, on account of his knowledge of the framework and the physiology of the body is coming in demand by corporations to determine the severity and extent of injuries in case of accidents.

The naturopath, the physical-culturist, and the food-scientist are all students of hygiene. I have seen cases of severe constipation that have gone the rounds of physicians pleasantly cured by living a natural life, taking proper exercise, and eating the proper food, and not a single drug (unless perchance a placebo, with the odor of a drug about it only) was given. Rheumatism has been absolutely cured by these means, besides a great many other troubles, including that dread disease, appendicitis.

Now, there must be something to these methods or nearly one-fifth of the American population would not be adopting them. Woods Hutchinson is not the only one that has hinted, in by no means whispering tones, that in the years to come the physician will be "out of business." It will be his work to show people how to keep well, but it will take a less number to do this. The physician will probably be paid to keep people well, and, perhaps, as in China, when the patients are sick his pay will stop.

Is a Drugless Era at Hand?

Up and down the length and breadth of this country health papers and magazines are being circulated without number. Health foods galore are being advertised. The whole country is being circularized to show

people methods that are conducive to health. People are waking up to the asserted fact that the doctors do not know much about health methods without drugs, in fact they antagonize them. The matter of national health is being taken up by the Government through the praiseworthy efforts of the Committee of One Hundred.

In all this very little is said about drugs. It would appear that a drugless era is about to follow the everlasting soaking for nearly a century with patent medicines. Great upheavals now and then take place, and the worst of it is that those who have tried the drugless healing like it extremely well, and I find it next to impossible to get them to take any kind of medicine when it is prescribed.

This, then, seems to be the evolution in medicine. What will be the outcome? This I feel is a hard question to answer. Many of the older physicians have already, as we have seen, partially answered for themselves by using fewer drugs. Some of the younger graduates, I note, are therapeutic nihilists, which I feel is due to a faulty training. As students we learn almost nothing about active principles. A few of these well used will meet many requirements. Perhaps, too, many useless things are taught in our medical schools. If more time was spent on hygiene (under which head come many of the drugless healers), personal and national, in all of its possible phases, we might be surprised to find how much good we might do without drugs; and yet it would be well always to carry them in our equipment. We should be getting a practical knowledge of "how to heal the sick." It might well pay us to examine these various cults, sift the wheat from the chaff, and include the best in our practice; so if a patient comes along and is a disciple of a certain sect of healing, we can wisely show him where the defects are and lead him intelligently on the right road to "Wellville." As long as you are not antagonistic, but are always open to the various cults to get all the good that you can out of them, these patients will come to you, and both you and the patient will be benefited.

For a year or more we have had in CLINICAL MEDICINE some very valuable instruction in materia medica and therapeutics. Now, if we could have some instruction in Hygiene, Foods, Hydrotherapy, Osteopathy, genuine Christ Science, and Physical Culture, we should be adding much valuable knowledge to that already attained on the physiologic properties and application of the alkaloids during the last twelve

months, and be better equipped to "heal the sick."

[This communication deals with matters of such vital interest to the profession that it will be treated editorially. Dr. Watson draws the lines well. The issue is squarely before us. The future of medicine depends on the way we treat the questions he so boldly raises.—Ed.]

Diabetes Mellitus: A Personal Experience

Do Intestinal Parasites Sometimes Cause It?

By JOHN B. LEIBERG, Leaburg, Oregon

THE writer desires most earnestly to interest the staff of CLINICAL MEDICINE, and through them the medical profession in the United States, to the subject-matter of this article.

I will preface my statements by explaining that I am a layman, but interested in the medical profession more or less because my wife is a physician of the regular school, a graduate of the Northwestern University; also that I employ most of my time in microscopical work with high powers and do not make loose and unsubstantiable statements in matters relating thereto.

Belief in a Typical Case of Diabetes Mellitus

Late in the fall of 1908 I discovered sugar in my urine. How long the condition had existed before it became noticeable I have no means of telling, but probably not more than a month or two. My attention first was drawn to the condition owing to the frequent desire to micturate and the pale color of the urine. The condition rapidly developed all the symptoms of diabetes mellitus, i. e., thirst, emaciation, pale urine with specific gravity varying from 1030 to 1045, amount voided in twenty-four hours from 100 to 130 ounces, sugar from 10 to 15 percent, emaciation, headache, vertigo, and particularly noticeable dimness of vision.

Thinking that travel and change of climate and food might work a cure or at least an

amelioration of the symptoms, I traveled to Japan, China and the Philippines in March, 1909. The only drug-treatment I had tried up to that time consisted in the use of various alkalis to counteract the acidity of the urine and the consequent irritation at the meatus, and of small doses of codeine in glycerin.

A few days before the sailing of the steamer on which I was to embark a change for the better was noticeable in my condition. In a week or so after sailing the symptoms began to disappear, and long before I landed in Japan I was entirely rid of the trouble. The cure was credited in part to the alkalis, in part to codeine, in part to change of climate and, to some extent, of food.

In the Philippines I remained four months, traveling through the wilds of Luzon, mostly on foot, camping out in rains and bad weather generally, with no recurrence of the diabetic symptoms. Nor did I suffer from any other form of sickness during this time. In August I left the Philippines for the United States via the Suez route, visiting various countries in Europe, and arrived in Washington, D. C., in November.

The Diabetic Symptoms Recur

Soon after reaching Washington I noticed a renewal of my diabetic symptoms. Tracing back, I fancied that they could be

located about one month earlier for their beginning. The symptoms were identically the same in character as they had been a year before. But this time it was discovered that alkalis and codeine had not the least power to change or ameliorate them. In February last I left Washington for my home here. My condition was constantly getting worse; there was great emaciation, and headache, vertigo and dimness of vision were so pronounced that I could scarcely walk without reeling from side to side.

On reaching home we began to look into the trouble in earnest. It was quite clear that unless a change for the better could be secured death would be the ultimate result. It was likewise clear that in ascribing the former cure to the alkalis and to codeine we had probably erred, considering that these remedies had no influence now over the disease, even in the slightest degree. We then began to trace back to the time of the former cure, endeavoring to ascertain if I had made use of any other drug than the alkalis and codeine at or about the time when the improvement had been noticed. And in doing this we solved the mystery.

The Worm Remedies Seem to Give Relief

In traveling about the country I always carry a small assortment of the alkaloidal preparations, among which the santonin and calomel combination is never lacking, since my microscopical work has taught me the prevalence of intestinal parasites of the roundworm type. In going to the Philippines—having been there once before and knowing the conditions—I provided myself, in addition to the santonin and calomel, with the 1-6-grain koussein granules and Barron's "worm-remover" combination, containing chelonin, gr. 1-6, santonin, gr. 1-10, and podophyllin, gr. 1-33. Now, in tracing back I recalled that a few days before embarking I had taken several doses of the "worm-remover" to expel any parasites of the roundworm type which might have found lodgment. The taking of a dose or two of some anthelmintic once a month or six weeks is a habit I have when traveling, but heretofore it had always been the santonin and calomel which had been taken. In

this case I had changed to the "worm-remover" to observe the action of the podophyllin with which this preparation is compounded.

Having ascertained that improvement and cure had followed the exhibition of the anthelmintic, we began to consider if the diabetic symptoms might not have their origin in the presence of some sort of intestinal parasite. To ascertain this I first secured free evacuation with saline laxative. The feces were examined and found to contain millions of cysts varying from 0.01 to 0.2 microns in diameter, some of them clear, others filled with granular matter, but most of them containing daughter cysts filled with coccidia-like bodies 2 to 3 microns wide and about twice as long.

Protozoic Parasites Found in the Intestines

We now had recourse to the worm-remover combination. The dose was nine granules at night followed by two granules the next morning. The dose was repeated twice, with an interval between the first and second dose of two days. The feces were examined after the first dose had operated. They contained thousands of organisms, one-celled, flask-shaped, evidently some form of protozoa, from 0.5 to 1.5 cm. in length and from 2 to 2.5 mm. in width at the broad, or posterior, portion of the body, to 1 or 1.5 mm. at the anterior, or neck, end. With the expulsion of the parasites the diabetic symptoms disappeared promptly. In a week the vertigo, dimness of vision and reeling walk had entirely vanished, and I am now in perfect health.

The parasites are *protozoa*, not nematodes. Apparently they belong to the gregarine type, to the group composed of one-celled organisms. I have no specimens or would send them to you.

I feel perfectly sure that we are not mistaken in ascribing the diabetic symptoms to the presence of these parasites. If one case has occurred in this country the probability is that there are many more due to precisely the same cause. I do not mean to say that all cases of diabetes are of para-

sitic origin, but where the onset is sudden and progress rapid one may suspect infection of the sort here noted as the cause.

Can Intestinal Parasites Cause Diabetes?

Will you not interest yourself in this matter and assist in shedding more light on it? If we have a disease in this country exactly simulating diabetes, of parasitical origin and curable by proper anthelmintics, it is worth while to find out all about it. There must be many other cases similar to mine which have been diagnosed as diabetes and treated as such without any improvement following. You are in a position to call wide attention to the matter.

Positive diagnosis is easy. Give a saline cathartic to obtain watery evacuations, examine the feces for cysts containing coccidia. A 16-mm. objective with an $\times 6$ or $\times 8$ eyepiece will show very clearly the large cysts. To recognize the coccidia-like bodies within them requires a 4-mm. objective with $\times 8$ ocular. If the cysts are present, give free doses of chelonin, santonin and podophyllin, not the santonin and calomel, which does not appear to give positive results.

To recognize the expelled parasites, wash the feces with care; the organisms can then be seen with the unaided eye as longer or shorter, slender, worm-like objects. They have no internal organs, but their ectosarc shows an anastomosing network of fine lines under an amplification of $\times 1100$, using apochromats and compound oculars. The lines I take to represent the myonemes present in organisms of the gregarine type.

The Source of Infection?

Difficult to say with any degree of certainty. At the present time I believe it to be found in common honey extracted without the aid of heat. I fancy that the two infections which I have suffered from have followed the eating of honey extracted in that manner. Should this supposition prove correct, the organism is of wide distribution, for the first infection must have had its origin in honey from California, the second in honey eaten while in Europe—Sweden.

Protozoa of the gregarine type are not believed to exist in the human being, though I think their occurrence in such a situation has been reported from South America. They are common enough in insects, earthworms and the like, where they cause peculiar lesions when in very great numbers. It is entirely within the range of possibilities that some forms may have their primary development in insects and reach their full development in the human being. This I believe to be the case in the present instance.

[We wrote to Mr. Leiberg, making some further inquiries concerning his case. He replied as follows:

"There is not the least objection on my part to the publishing of my letter in your journal. On the contrary, the greatest publicity possible on the matter is invited. I shall take pleasure in replying to any inquiries relative to the case, and will gladly examine any specimens for purposes of identification which may be sent me by physicians, free of any charge whatsoever. My interest in the subject is wholly from the scientific standpoint. If a protozoan organism is at the bottom of diabetes mellitus, or of a disease so exactly resembling it that it cannot be differentiated either grossly or through chemical diagnosis, we cannot become acquainted with the fact any too soon. Specimens sent should be free from fecal matter clinging to them and should be immersed in either glycerin and water, equal parts of each, or in methyl-alcohol of 50-percent strength.

"The sugar in the urine and all other symptoms of diabetes mellitus have entirely disappeared and I am now quite restored to health. Will say that I am 57 years of age. During the last forty years have been ill but once. For the past twenty-six years have led mostly an outdoor life in the forests and among the mountains of the West during the summer seasons. Do not use tobacco or alcoholic drinks in any form.

"As I wrote you in my previous letter, I have suffered two attacks of the diabetic condition. Am unable to specify exactly how long after taking the worm remedy in

the first attack before improvement set in, but at the most not over a week could have passed. In any case, not more than three weeks passed before I was well. In the last attack 22 granules in four doses of the worm combination were taken on two days, with an interval of two days between each second dose.

"Within two days after I had taken the last doses improvement began. First the abnormal thirst disappeared and with that the daily amount of urine passed became much lessened. Vision cleared and the normal gait was restored. Periods of semistupor which now and again had marked the progress of the disease disappeared wholly. In ten days all traces of sugar in the urine had vanished. The appetite became normal. Am moderately fond of sugar, but in the latter stages of the attack I experienced a particular aversion for it, and a correspondingly increased desire for acids. Did not either in the first or second attacks try any of the food regimens advised for diabetes.

"Dear Doctor, of these propositions I am certain: my case, twice repeated, could not be diagnosed as any other disease than diabetes mellitus. Twice it has been cured, the last time beyond a doubt by an anthelmintic; the first time almost certainly by the same remedy. In the last attack the exhibition of the anthelmintic was followed by the expulsion of thousands of a protozoan parasite, and with their expulsion complete recovery ensued.

"These are the straight, unadorned facts, Doctor, no matter how strange they may appear or how much they may controvert accepted teachings as to the cause of diabetes mellitus. Yet I do not mean to assert that there can be no other causes for the condition we designate by that name. But it seems entirely within reason that cases similar to mine exist in other parts of our country, and abroad, too, for that matter, and which can be cured with the same or similar remedies.

"In my former letter I ventured the opinion that the organism under consideration might belong to the gregarines. While all the

specimens I examined were devoid of differentiation of the body, yet it is not impossible that the organism is provided with an epimerit, or in case it should be classed with the acephaline division of the gregarines, it may yet be provided with holdfasts such as are figured by Calkins in 'The Protozoa,' page 59, figure E., a figure that very closely resembles the anterior portion of the organism we are discussing. Were such the case, some consideration as to the proper kind of anthelmintic to be employed would be necessary. It is improbable that the parasite could maintain its position in the alimentary tract unless it was provided with hooks of some sort, and the burrowing of thousands of individuals in the mucosa of the tract could scarcely fail to set up an intense irritation. Am unable to state anything definite as to the section of the alimentary tract inhabited by the organism, but it is neither the rectum nor the duodenum, in my opinion.

"I would suggest that the same remedy employed by me be tried in other cases, that is, this worm remedy. It may happen that either the podophyllin or the chelonin in the remedy [it contains chelonin, santonin and podophyllin.—ED.] has a specific action on the organism not possessed by other drugs. In my researches among the gregarines flagellates and ciliates living as parasites or as commensals in the intestinal tracts of insects I find great and unexplainable differences in the action of various drugs upon closely related species in the same host.

"I have ascribed the infection to honey. This, however, is a mere supposition and presents many difficulties. Still it is not impossible. It is only necessary to recall the number of species of sporozoa which are known to require as hosts a cold-blooded invertebrate and a warm-blooded bird or mammal in the complete cycle of development. Of course, some other vehicle than honey may have carried the infection. In my mode of living, however, in my food and drink I have for many years exercised the greatest possible care to avoid bacterial and other infection.

"I want to thank you, Doctor, for taking this matter up. At the first glance it would seem utterly incredible and unworthy of belief that a disease so long known as diabetes mellitus could be caused by an organism of this sort and its origin not long ago have been discovered. But the very simplicity of the thing has probably been the cause of turning the minds of investigators away from the true track. For my own part I should be inclined to disbelief had I not tested the matter in my individual case. At the same time it is well to restate my position in the matter, which is:

We have in America a disease which presents each and every salient symptom of diabetes mellitus and which is caused solely by a protozoan intestinal parasite, probably of the gregarine order; the administration of appropriate anthelmintics will cause the ex-

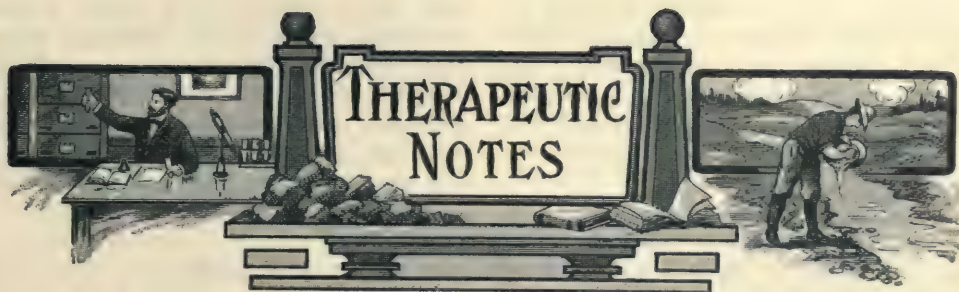
pulsion of the parasites; and the expulsion of the parasite quickly causes the disappearance of every pathologic symptom and condition associated with the disease and a restoration to health, in so far as the illness was dependent on the diabetic condition."

Mr. Leiberg's correspondence can hardly fail to create intense interest and, we hope, a new study of the etiology of diabetes. We want to make the suggestion that as many as possible send him samples of feces from suspected cases, *also sending samples to us*, that we may have them examined here in Chicago. Thus we may have mutual checks or "controls," and, we trust, escape error. The therapeutic suggestions made should be closely followed up in every case of diabetes resisting treatment. The "worm remedy" advised by Mr. Leiberg is available in granule form.—ED.]

The Master Questions

BEFORE performing any act, great or small, ask yourself these questions, and you will find in your hands the Master Keys that will give you entrance into Success Town: *What* shall I do? *Why* should I do this? *How* shall I do this? *When* shall I do this? Have a good reason for all your acts, and all the powers of concentrated Wealth, Fate, Bad Luck, Enemies, Chiggers, Hookworms and Unkind Gods cannot prevent you from winning for yourself Permanent and Increasing Success. And success is only another name for Happiness.

Thomas Dreier



COLD WATER IN FEVER

C. D. Phillips (*The Medical Times*, London, April 9, 1910) says: "As a mild but effective method of applying the cold-water cure to cases of fever, water beds are well adapted. By running cold water through the bed continuously the temperature of the patient lying on it may be to some extent controlled."

ETHER, ALCOHOL AND PHAGOCYTOSIS

E. A. Graham (*Jour. Am. Med. Asso.*), studying the effect of ether on certain processes of immunity, found that this agent markedly reduced the phagocytosis in infections with streptococcus, pneumococcus, staphylococcus aureus, bacillus coli, and bacillus typhosus. The reduction of phagocytic power of the blood after an ordinary ether anesthesia continued, in different experiments, over periods of two days' to several weeks' duration. This depression apparently was due to a direct effect of the ether both on leukocytes and serum, not to any effect on the bacteria themselves. Rubin showed that hypodermic injections of alcohol, ether and of chloroform render rabbits much more susceptible to systemic infections with streptococci and pneumococci, and that *in vitro* alcohol and chloroform diminish phagocytosis with respect to the pneumococci, streptococci and staphylococci.

Stewart showed that in normal human beings the ingestion of only a small amount of alcohol markedly lowered the opsonic index as to the streptococcus and tubercle

bacillus. Others showed that animals to which alcohol and ether had been given succumb much more readily to experimental infection than do the controls, this being particularly the case with those infections the immunity in which was chiefly phagocytic. Moreover, it has long been known that alcoholism predisposes to pneumonia, erysipelas, etc., in which phagocytosis plays a part.

PHYSOSTIGMINE AS A PERISTALTIC STIMULANT

Physostigmine produces favorable conditions for peristaltic movement, indicated by stomach or intestinal inertia. Inject daily 1-200 to 1-60 grain of atropine sulphate and follow later by 1-60 to 1-20 grain of physostigmine sulphate. Begin with the minimum dosage and slowly increase. This will accomplish most excellent results. The injections may be made intramuscularly in the gluteal or crural regions.—Turck, *Medical Record*.

BUTTERMILK AND INFANTILE SCURVY

Ortiz (*Archives de Médecine des Enfants*, December, 1909, through *Medical Review of Reviews*, Feb. 1910, p. 84) has used buttermilk in feeding infants for several years with very satisfactory results, and was surprised to discover a typical case of infantile scurvy in one of the infants fed on this preparation. He searched the literature and was unable to find any reported case of scurvy in an infant fed on buttermilk. Some children do very badly on buttermilk. Monti be-

lieves the excess of albumin produces an intestinal autointoxication. Selter attributes the bad effects as due to the butter-fat, while Finkelstein believes the toxic phenomenon the result of the large amount of sugar. The author is of the opinion that the lactic acid is the offender.

He then describes the cases in which buttermilk in indicated, these including such conditions as chronic gastroenteritis and dyspepsia.

The buttermilk as recommended by the author is prepared as follows: A liter of buttermilk is placed in an enameled casserole and a tablespoon of flour is added. This is placed on the stove and constantly stirred until it reaches the boiling point. Three tablespoonfuls of sugar are added and the buttermilk allowed to boil for five to ten minutes.

The case reported by him is that of a typical case of scorbutus, which developed in an infant whose mother boiled the buttermilk for half an hour instead of ten minutes as directed. Orange juice was given and the buttermilk discontinued and the baby made a rapid and complete recovery.

The fault lay more in the prolonged sterilization of the food than in the buttermilk itself.

ARBUTIN IN CYSTITIS

Cardoso reported (*La Dosimetrie*) his employment of arbutin in cystitis. The first case was that of a lady afflicted with chronic cystitis extending to the ureters—urine cloudy, ammoniacal, charged with sand, not albuminous; micturition frequent and painful; pollakiuria; no calculi. Many instituted treatments had failed. The woman presented symptoms of slight uremia. Hematuria had endured two days. She was given oil of turpentine, to arrest hemorrhage, and in addition arbutin. The effect was rapid. After the bleeding ceased she continued the arbutin, in connection with alkalis and cicutine. In a few days she was much better and in two months was cured.

A professor of the school had chronic cystitis with an acute exacerbation, pollaki-

uria, rectal tenesmus and intense colitis. Treatment consisted in prolonged tepid baths, and administration of atropine and cicutine to effect, and digitalin, arbutin, and a laxative saline. Amelioration was rapid, the acute attacks subsided; arbutin alone was continued, and this cured the cystitis completely.

SEASICKNESS

Goyard (*La Dosimetrie*) sought to prevent seasickness by taking, before embarking, a dose of hyoscyamine, Gm. 0.0005, and strychnine sulphate, Gm. 0.001. As the attack came on this dose was repeated every fifteen minutes, then every ten minutes, and at last every five minutes, for two or three times; after that less often as the nausea subsided. In twenty-four hours he thus took, in all, 0.0115 Gram hyoscyamine and 0.023 Gram strychnine. By this time everybody else on board was sick, even the crew; but Goyard himself was easy. Appetite came, and he slept well all night. The only symptom was a little dryness of the throat and sleepiness, although ordinarily half a milligram of hyoscyamine would render him uncomfortable for two days.

Manassein recommended, for combatting this trouble, repeated doses of cocaine; Burggraefe, however, warned against this drug in the stage of vital depression accompanying seasickness.

TREATMENT OF FETID BRONCHITIS

Cardoso (*La Dosimetrie*) describes his successful treatment of a case of fetid bronchitis. A woman complained of dyspepsia, and a paroxysmal dry cough every morning. This was relieved by treatment. Four months later, after catching cold, she was seized with a cough, more persistent and frequent, with abundant fetid expectoration. Great pain was felt in the right shoulder. She had a febrile pulse; temperature was 100.76° F.; there were rough breathing, and sibilant râles in the median posterior part of the right lung; disseminated sounds in both lungs. Her breath

was extremely fetid. This was his treatment: Digitalin and aconitine to combat the fever, pushed to effect; helenin, strychnine hypophosphite, one milligram each every two hours. Blister over the tender spot. At the end of three days the sputa were completely modified, as well as their odor; fever had disappeared; cough was less but still annoying. Continuing the same medication and adding iodoform and codeine, the patient was cured in six days.

CREOSOTE IN TUBERCULOSIS

R. W. Philip (*The Medical Times*, London, April 9, 1910) says that prolonged use of creosote has led him to the conclusion that creosote exerts a beneficial, and even curative, effect in the more chronic forms of pulmonary tuberculosis. Cough and expectoration are often reduced remarkably, secretion being lessened and thereby the need for cough removed. The gastrointestinal tract also benefits, while appetite improves and the complicating diarrhea is frequently relieved. In the author's experience disturbing effects are not observed when pure beechwood creosote has been used; and still more rarely does renal trouble ensue, although "an eye must be kept on the urine, nevertheless."

VERATRUM VIRIDE

John H. Landis read before the Academy of Medicine of Cincinnati an interesting paper on veratrum viride, which was published in *The Lancet-Clinic*, April 16. Dr. Landis says that after eighteen years of clinical experience with the drug, under a constantly widening variety of pathological conditions, he has come to regard it as the most valuable single therapeutic resource at his command. Its value lies in its power as an eliminant, and when we consider that elimination in strictly medical cases is of the same enormous importance as drainage is to surgery, it cannot be overestimated. The value of veratrum further lies in its power to overcome sthenic states and thereby actually abort or modify in a favorable way acute inflammatory conditions, and in its

power as an antispasmodic. Possibly the drug increases the normal resistance to inflammations or acts as an antidote to toxins. Possibly it works through the vasomotors, restoring the normal condition in inflammatory areas in which the vasomotor control had been lost. In these conditions of acute inflammation with high fever, full rapid pulse, and impending or actual delirium, its action is little less than magical. Under the influence of a 10-drop dose of the tincture at half-hourly or hourly intervals, the whole picture is changed in a few hours. The pounding heart becomes almost or quite normal, the pulse soft and compressible, the skin moist, the fever subsides, the mental disquiet gives way to a state of calm, and the condition is changed from one of imminent danger to one of comparative safety.

ADVANTAGES OF ALYPIN ANESTHESIA

F. M. Fernandez, Havana (*Therapeutic Gazette*, January 1910) says that alypin produces the same anesthetic effect as does cocaine, without dilating the pupil, which is of particular advantage in ophthalmology. He has used alypin for a considerable time, without noticing any unpleasant effect, for the removal of foreign bodies, or the excision of superficial growths, prior to the application of silver nitrate and other caustics.

In otorhinolaryngology the author has used the drug even more extensively and with so satisfactory results that he almost discarded cocaine. It should be noted that alypin and stovaine are very closely related.

Combined with adrenalin its anesthetic effects are prolonged and more intense.

FORMIC ACID AND BEE STINGING

Arthur P. Luff (*The Lancet*, London, March 12, 1910, page 715) says that bee poison contains in addition to formic acid an alkaloidal base akin to the venoms, but it would appear that the action of bee poison in rheumatic subjects is attributable to its formic-acid constituent. It is possible that if the direct stinging with bees is of any

efficacy in the treatment of rheumatism, it is simply due to the action of formic acid as a counterirritant. Dr. Luff has had no experience with the treatment of rheumatism by means of bee stings, but a few years ago, gave an extensive trial to the treatment of several forms of chronic rheumatism by means of formic acid, administered internally. The results, however, were so discouraging, and compared so unfavorably with the results obtained by other methods of treatment, that he has completely abandoned the use of formic acid.

ADONIDIN AND THYROID

Dr. Heinrich Stern (*Medical Review of Reviews*, Feb. 1910, p. 76), recommends the addition of a cardiac tonic to thyroid whenever the latter preparation is to be used for any length of time. His decided preference is for adonidin. He recommends the following formula:

Sodium cacodylate.....gr. 1-200
 Adonidin. gr. 1-30
 Thyroid gland(dry powder) gr. 1
 For one compressed tablet.

Adonidin is high in price, but readily obtainable in granule form. In its absence caffeine may be substituted in doses of 1-6 grain.

QUININE AND CANCER

Dr. Franz Stroné has used quinine in cancer with good results (*Med. Klinik*, November 28, 1909, through *Medical Review of Reviews*, Feb. 1910). He has used the pure alkaloid and its salts in many cases of epithelioma, and in all instances he has observed the same sequence of events, viz., formation of tissue-detritus, great increase in the size of the sore, scar formation with ultimate healing. He offers the following practical therapeutic hints:

1. The quinine is mixed with water to a pulpy mass and spread on the wound by means of a pledget of cotton.

2. The dressing (bandage) is changed every two days.

3. The quinine is employed as long as the sore seems to increase in size from one dressing to another.

4. This treatment is a good means of differential diagnosis, especially when we have to decide between beginning epithelioma of the cervix and an ordinary erosion.

5. It is also a priceless means for the palliative treatment of inoperable cancer of the uterus, and especially of the portio and vagina.

6. The author also believes that before performing a radical operation, it would be practicable to treat a uterine carcinoma with quinine for a few days, especially if there is any doubt whether the lesion is cancerous or inflammatory in nature.

NARCEINE IN DIABETES

It is well known that morphine and codeine have the power of checking glycosuria, but several authorities assert that this is not equal to the control exerted by opium itself. It seems, therefore, that there must be an agent in opium that is more efficacious than either morphine or codeine. Naturally we would look to the alkaloid most nearly allied to these two, namely, narceine. Since the quantity of this alkaloid found in opium is very small, it must be assumed to be a small-dose effect that is exerted in diabetes. I would advise a trial of narceine in doses of one milligram four times a day, gradually increased if necessary.

SUCCESSFUL TREATMENT OF DYSENTERY

Lorenzana's patient (*La Dosimetrie*), a man aged 34, had acute asthenic dysentery: extreme prostration, tongue blackish, pulse small and slow, temperature 98.9° F., abdomen tympanitic, stools bloody. He was given a laxative saline, followed by strychnine arsenate and hyoscyamine, a granule each every half-hour, hour or two hours, according to effect; and 2 granules of quassin every three hours; chicken bouillon. On the next day the patient's strength had increased, but the stools were still bloody.

Treatment was changed to tannic acid, 4 granules three times a day. Two days later the stools were soft, with no blood. Of the alarming clinical picture only the weakness remained. Strychnine and iron arsenates were given, and recovery ensued.

ATROPINE AND PHYSOSTIGMINE IN HYPERCHLORHYDRIA

No systemic drug-treatment for hyperchlorhydria and its associated conditions can be compared with the hypodermic injection of atropine, followed later by physostigmine. Atropine has a quieting antispasmodic effect, yet does not check peristalsis. It also renders the mucosa less sensitive to local irritation causing spasm.

GUARANINE FOR NEURALGIA

A girl, aged 13 years, had supraorbital neuralgia, with vertigo and headache. She was given guaranine, 3 granules three times a day for five days. The headache had disappeared and the vertigo was better. She was then given caffeine valerianate for two days, when the cure was complete.

A woman, aged 30, had severe hemicranias, almost constantly, followed by vomiting and delirium. Guaranine was given, 3 granules three or four times a day. The headache moderated, and ceased by the time she had taken 100 granules. No sensible effect was noted from the doses given.—Alessandri.

APPLICATIONS OF CICUTINE

Gubler said (*La Dosimetrie*): "Cicutine is not only hypokinetic, it is also stupefiant or anesthetic, and finds its place in affections eminently dolorous. But it is especially in maladies hyperesthetic and spasmodic, of the respiratory apparatus, which serves it as an avenue for elimination (as in the cough of quinsy and of pertussis), that cicutine is called on to render great services. Only, to take advantage of its volatility, it is necessary to avoid its association with acids, and to employ it free, dis-

solved in alcohol and diluted into a potion." But cicutine in solution decomposes so rapidly that this is not advisable.

CHLOROFORM POISONING

At a late meeting of the Washington Obstetrical Society J. F. Moran reported a case of alleged chloroform poisoning following forceps delivery. The symptoms of poisoning occurred two days after the confinement and the patient died three days later. Jaundice was a prominent symptom.

BURGGRAEVE'S OBESITY REGIMEN

Burggraeve recommended:

1. A morning laxative saline.
2. At meals quassin and sodium arsenate.
3. At bedtime strychnine arsenate, digitalin and aconitine.
4. Mixed diet, animal and vegetable.
5. Active exercise.
6. Hydrotherapy.

SPITTING, VENTILATION AND PNEUMONIA

Careless spitting and lack of ventilation operate in the development of consumption as in pneumonia. The laws of hygiene for one apply with equal force to the other.

The people who have contracted pneumonia since the cold weather set in have either recovered or died. Pneumonia is a disease which shows itself quickly, and which quickly runs its course. On the other hand, the people who have contracted consumption this winter are just beginning to wonder why their "bad colds" hang on so long; why it is that they feel a little "offish" each afternoon.

Our plea to this latter class is that they shall go at once to the most competent doctor they can afford to consult and there get an honest diagnosis. If a doctor cannot be afforded, go to one of the free dispensaries of the Chicago Tuberculosis Institute. If this action be delayed until next summer it will then be too late to get well. If people

will discover their tuberculosis early, and then live right, they will get well.

Why neglect your colds and die when a little trouble now would give a good chance to live?—*Chicago Health Bulletin*.

THE CAUSES AND TREATMENT OF RHEUMATIC FEVER

Wm. S. Gordon in *The Virginia Medical Semi-Monthly*, for March 25, 1910, says that in the treatment of rheumatism diet holds an essential place. In a pure infection, allow as much stimulating proteid food as the general condition of the patient justifies. On the other hand, if there is over-production or defective elimination of uric acid, we are prolonging the malady and endangering the patient's present and future welfare by allowing him a diet rich in nitrogen or other uric-acid producers. There is a tendency at present among some of the profession to belittle the role which uric acid plays in the causation of disease. Haig may have gone to one extreme in his views but his opposers have gone to the other. Whatever be the nature of gout and rheumatism, every practical physician realizes that they are amenable to treatment, provided the patient will carry out his instructions. But diet is not all. It is almost a matter of as much importance to open the doors by which the poison goes out as to close the doors by which it goes in. Hence, elimination must be obtained through the bowels, kidneys and skin. Sunlight, fresh air, and exercise must be used when practicable, while coincident conditions, when threatening or troublesome, must be met by appropriate measures, medicinal or otherwise.

HICCUGH AND ITS TREATMENT

The Practitioner of April, 1910, page 550, says that for practical physicians, severe hiccough has a special interest in fevers and pulmonary diseases, as indicating a grave prognosis, and in directing attention to blood stasis in the lungs and pulmonary arteries, and to a failing right heart. The position of the patient in bed must be changed fre-

quently, stimulating sinapisms should be applied to the chest, cardiac and respiratory stimulants, alcohol, ammonia, strychnine, and atropine should be considered, and in many cases an emetic may be given. Possibly jugular phlebotomy may help in suitable cases, and inhalation of oxygen, artificial respiration, citric and tartaric acids are advocated. In the gastrointestinal variety, not dependent on rupture of intestines, lavage or an emetic, with or without a full enema, may be followed by antiseptics and gastric sedatives. Lithemic conditions frequently supply the key to rational treatment. In chronic cases, besides the local treatment, one would seek to restore the tone and control of the nervous centers by tonics. While these indications are being pursued, and where the recurrent spasm is exhausting a feeble subject, nothing is so immediately and generally effectual as pressure with the thumbs and nails upon the supraorbital nerves.

MEDICAL TREATMENT OF INGROWING NAILS

The American Journal of Dermatology, and Genito-Urinary Diseases, quoting an exchange, says (April, 1910, page 176) that free application of dry powdered alum is sufficient to cure every case of ingrowing nail in about five days. The applications are not painful, and the destruction of the pathologic tissue results in the formation of a hard, resistant and non-sensitive bed for the nail, a perfect cure for the ingrowing tendency. The non-toxicity of the alum, its easy application and the good results render it the treatment of choice for cases in which surgical treatment is not contemplated. A fomentation of soap and water is applied for twenty-four hours beforehand, and then the alum is applied in the space between the nail and its bed, tamponing with cotton to keep the alum in place, and repeating the application daily. Under this treatment the suppuration rapidly dries up, and the pain and discomfort are relieved almost at once. The method is deserving of trial and reports.



Neuralgias and Their Treatment

A GREAT pain of more or less intensity does not necessarily constitute a neuralgia. The word "neuralgia" denotes pain which affects a nerve in its entire length or only a part. Certain points characterize this pain, viz., points where the pain is more particularly felt upon pressure. These points are at the emergence of a nerve on its passage through a bone, or at points where nerves pass from deeper layers to the surface.

Although very obstinate, a local pain does not constitute a neuralgia, necessarily. Thus a contusion will induce pain in the nerve terminals without, however, the pain being felt in the entire course of the nerve. Pressure made on a nerve in its course does not give a series of painful points but rather a series of painful areas spreading out from those points.

In intercostal neuralgia the diagnosis is easily made by discovering the pain at the corresponding spinous processes. In sciatica and in neuralgia of dental origin the painful points have been sufficiently located, so that it would be useless to enumerate them here; so, too, have been the points in facial neuralgia determined. The intensity of the pain is frequently defined with difficulty, for there is always something personal in it. Thus a pain without any discernable cause of any lesions may be felt by a neurasthenic person with great intensity, while a pain which naturally should be very lively may be felt by him with a less degree of intensity; at any rate, it will make itself felt by a neurasthenic differently than any other person would experience the same. We can grow

accustomed to pain. Thus a working woman habituated to a rough and laborious life will, evidently, be less apt to complain (and she really does feel less) than a woman accustomed to luxury, and leisure to study out and feel out all her ailments.

When we get a case with neuralgia, the first thing of importance is to discover the cause. That cause may depend on some local lesion or on some general affection or it may depend on a diathesis. In an alcoholic person, an intercostal neuralgia, which is very frequent in such cases, may be due not only to intoxication but also, and that more frequently, to a hepatic lesion or some lesion of the stomach. In metritis intercostal neuralgias may depend on anemia or on chlorosis following an unusual menstrual flux, or also on gastric troubles connected with that chlorosis. There also are neuralgias of rheumatic or of syphilitic origin, or they may be owing to paludic infection. Neuralgias owing to chlorosis or anemia are the most obstinate.

What physician has not been baffled in treating some case of sciatica? Is it a kind of rheumatism? Does it depend upon the condition of the genital organs? Is it due to an excess of horseback riding in cavalry service? Is it the result of hemorrhoidal affections from a sedentary occupation? The same embarrassing situation may be encountered in other neuralgias. A neuralgia connected with the teeth may arise from rheumatism of the alveoli, or it may have the caries of a tooth as its point of departure.

There is something special in the case of syphilis. An exostosis may produce pain without the pain indicating a neuralgia, and yet some neuralgias have syphilis as their originative cause. These neuralgias must not be confounded with pain from exostosis, for in the latter case that pain does not exist when pressure is made on the apophyses [points of exit] of the corresponding nerves.

The continuity of the pain or its intermittence are not sufficient to establish a diagnosis of neuralgia or to determine its nature. Certain neuralgias are painful at certain moments and during a certain period of time. There is a periodicity which does not indicate paludic intoxication. Periodicity and intermittence have their value in fever only.

A local lesion may, in time, end in a neuralgia, and this is what may be observed in dental lesions. A tooth which at the outset perhaps does not cause more than a very acute pain may in the course of time produce a neuralgia in that part of the trifacial nerve which is distributed to the affected maxilla, and may a little later affect all the branches of the nerve and thus enlarge the field of its painful action.

Generally speaking, when the trouble is in the course of a nerve of many branches the disease attacks, successively, one branch after another as if the lesion were propagated from the branches to the trunk of the nerve and thence to other branches.

In rheumatismal neuralgias the manifestations are manifold, and the pain frequently alternates with that of the joints.

In pleurisy, not less than in the pain from syphilitic exostosis, the absence of pain on pressure upon the corresponding apophyses does away with any thought of neuralgia. On the other hand, it is unnecessary to remind the reader how often we have made the erroneous diagnosis of neuralgia, how so often neuralgias are mistaken for cardiac pains in chlorotic and neurasthenic women.

When neuralgias have been of long duration, then the hyperesthesia of the nerve terminals is succeeded by a kind of an anesthesia and the sensibility is blunted. Is there not here, then, an alteration in certain

corresponding centers of the spinal cord? It is in sciatica that we observe this phenomenon most frequently.

When a neuralgia depends upon a cachexia, then the nature of that cachexia exercises an influence on the seat of the neuralgia. In chlorosis it is the trigeminal nerve, and the nerves of the solar plexus, that are more frequently affected. In paludic cachexia it is the ophthalmic nerve that suffers most.

Gastric and intercostal neuralgias are met with in women who are exhausted by too abundant menses or by leucorrhea.

Neuralgia, whatever its cause or location, demands, first of all, suppression of the pain, and after that treatment for removal of its cause. However, there is no other kind of treatment that can be so much varied as that of neuralgia.

The dosimetric [alkalometric] physicians are well armed for the alleviation of that pain, for, aside from revulsive measures, under whatever name known, they, like all other physicians, have at their disposal a whole series of remedies in the form of granules that are simple yet exceedingly efficacious. And here are the principal ones, to wit:

Granules of monobromated camphor of 1 centigram (gr. 1-6); of atropine of 1-2 milligram (gr. 1-134); of cicutine hydrobromide, or the hydrochloride, of 1-2 milligram (gr. 1-134); croton chloral of 1 centigram (gr. 1-6); quinine valerianate of 2 centigrams (gr. 1-3); iron valerianate of 2 centigrams (gr. 1-3); hyoscyamine of 1-2 milligram (gr. 1-134); morphine hydrobromide, or the hydrochloride, of 1 milligram (gr. 1-67); quinine hydrobromide of 2 centigrams (gr. 1-3); quinine hydroferrocyanide of 1 centigram (gr. 1-6) and also of 1 milligram (gr. 1-67). There is also a cicutine granule of 1-2 milligram (gr. 1-134); an aconitine granule of 1-2 milligram (gr. 1-134); granules of gelsemin of 1 milligram (gr. 1-134); of cannabin tannate of 1 milligram (gr. 1-67). In addition to these we have a number of compound granules.

In every case of neuralgia we must, of course, make use of some specific remedy, besides the necessary pain-allaying medications.

Thus, for instance, in syphilis we use the compound granule of protoiodide of mercury, 1 centigram (gr. 1-6), and strychnine, 1-2 milligram (gr. 1-134), which does good service when given in dosage of four or six granules daily.

In rheumatism and in gout we give ureol [a compound of urotropin, sodium and lithium benzoate], which is the best uric-acid solvent. To this we add colchicine, or better still, give the latter in its combination in the compound granule which consists of colchicine, 1 milligram (gr. 1-67); aconitine, 1-2 milligram (gr. 1-134); digitalin 1-2 milligram (gr. 1-134); strychnine arsenate, 1-2 milligram (gr. 1-134).

In paludic affections we add to the quinine salts the sulphate, or still better the arsenate, of strychnine; and this forms the surest and most efficacious treatment.

In anemia and chlorosis the compound granule consisting of iron arsenate, 1 milligram (gr. 1-67); quassin, 2 milligrams (gr. 2-67); quinine hydrobromide, 1 centigram (gr. 1-6), will serve well to battle with the diathesis. The granule of hydroferrocyanide of quinine will also serve the same purpose, and may be added to the above.

To allay the pain, dosimetrists may choose from among several most efficacious compound granules. Thus, for instance, if the pain is spasmodic the antispasmodic granules will have to be used, and if the pain is neuralgic only, then the antineuralgic granules are given. Here are their respective formulas:

Antispasmodic Granule

Strychnine arsenate, 1-2 milligram, or gr. 1-134.

Hyoscyamine, 1-2 milligram, or gr. 1-134.

Morphine hydrochloride, 1 milligram, or gr. 1-67.

Antineuralgic Granule

Quinine valerianate, 0.02 centigram, or gr. 1-3.

Aconitine (amorphous), 1-2 milligram. or gr. 1-133.

Hyoscyamine, 1 milligram, or gr. 1-67.

¶ In sciatic neuralgia the best effects are produced by aconitine, gelsemin, and cannabin tannate, combined.

Among the dosimetric [alkaloidal] granules there is one to which I would call especial attention, and this is that of quinine hydroferrocyanide. In neuralgias of doubtful origin this agent has proved particularly efficacious in my hands. I have spoken of it elsewhere before.

The last time I employed this preparation (with hardly anything else) was for intercostal neuralgia in a young anemic lady, the attacks occurring two or three days after her menses, which were very abundant. She also had leucorrhea. These neuralgic attacks would not cease at all except at the moment the menses appeared, and then made their appearance again a few days after. At the moment when the neuralgia stopped it would be followed by cephalalgia. At the end of eight days, during which she took 10 granules of hydroferrocyanide of quinine every twenty-four hours in ten doses, the attacks ceased and never returned; and this was more than six months ago. The entire condition of this young woman improved, the menses also becoming regulated; they do not now last as long and especially are less abundant. For fifteen days during every month I had her take the hydroferrocyanide granules, but only three a day.—Dr. Pigeaud, in *La Dosimetrie*, March, 1910, p. 43.

IRONING AS A MEANS OF PROPHYLACTIC DISINFECTION

In a recent article, K. Svehla discusses the subject named in the title. Linen, wool and cotton goods are very liable to become infected with the germs of communicable diseases. The author made a test to find out how far hot-ironing will affect these bacilli carriers bacteriologically. He touched such an infected material with agar cultures and after moistening the same, a single passage of the hot flat iron was sufficient to sterilize its surface, especially when thinly woven. But the effect of a single passing over the moistened surface does not penetrate very deep. For the thorough destruction of the germs the ironing must be repeated several times. Thick material, such

as woolen cloth can not be sterilized by ironing. But inasmuch as bacteria brought in contact with thick fabrics do not penetrate into them but remain on the surface, they naturally become exposed to the action of the hot iron.

The author considers this mode of disinfection practical in case of linen cover garments put on before visiting infected patients. If these garments are moistened and ironed each time after such use, the author thinks a sufficient germicidal effect would be obtained.—*Arch. f. Hyg.*, 1909, 70, 4.; in *Pharm. Zentralh.*, 1910, p. 160.

POTATO (OR SOLANINE) POISONING

According to Haselberg potato poisoning can not be traced to the solanine content, because of the minute quantity of the alkaloid, which is 0.24 Gram *pro mille*, which should exclude the possibility of poisoning. Neither can putrefactive bacteria, which, according to Schmiedeberg and Schül, increase the percentage of solanine, be made responsible for potato poisoning. But Dieudonné showed, in a case where a large number of persons were poisoned, that a pure culture of the proteus vulgaris could be raised on the potato salad they ate, and that the poisoning effect could be ascribed to the endotoxin contained in bacilli. By others, again, it was noticed that the bacteria in these cases are mostly of the bacillus coli group, and these bacteria increase very rapidly on the media of warm potatoes.—*Med. Klinik*, 1909, 32.; in *Pharm. Zentralh.*, 1910, p. 160.

INTERCOSTAL NEURALGIA

W. Janowski observed intercostal neuralgias 440 times in a total of 4,800 patients, i. e., in 9 per cent of his patients, and found the sexual ratio to be females 71; 29 males taken in a hundred. The ages ranged mostly between 21 and 40 years. In 70 per cent the neuralgias were on the left side, in 17 per cent on the right side, and 13 per cent bilateral. The prevalence of cases on the left side may be owing to a slight congestion of the blood in the veins of the left side of the

body. (Henle.) The causes may be direct and indirect ones. Indirect causes are predisposing conditions, neurasthenia, uric-acid diathesis, and phthisis. Direct causes are colds, preponderatingly, then come infectious diseases (influenza, tonsillitis), pleurisy, bronchitis, cough, nervous irritations, and vasomotor influences.

The diagnosis is easy when we think of the points of pressure. Prognosis is favorable. 95 percent are cured. A recommendable energetic therapeutic means, according to Janowski, is cantharidal plaster applied directly over the painful points, repeated, if need be, after six or ten days. At the same time the predisposing causes must be removed.—*Wratch Gaz.*, No. 51, 1908; in *Wien. Med. Woch.* 1910, col. 240.

A GIANT INFANT

Dr. Demetrio Galatti presented to the *Gesellschaft fuer Innere Medizin und Kinderheilkunde* in Vienna, at its session, December 16, 1909, a giant nursing infant four months and ten days old. The boy weighed, at birth, 4370 Grams (9 1-3 pounds); his height was 57 centimeters (23 inches). He is nursed by his own mother. The boy now weighs 9500 Grams (20 1-3 pounds), and measures 72 centimeters (28 4-5 inches).—*Wien. Med. Woch.*, 1910, col. 286.

ORIGIN OF ATMOSPHERIC OZONE

According to the researches of Bouyssy and Henriet ozone is formed by the ultra-violet rays of the sun. The ozone-content of the air is, therefore, greater on sunny days, also when winds blow from the southwest, and when it rains. Ozone is said to form in the higher strata of the air and is brought down thence by the southwest winds, which also originate there. The same is the case with the rain, the drops of which are surrounded by ozone which they bring down to the earth. The contrary is the case with carbon dioxide, which originates in the earth and increases in the air when there is less sunshine, southwest winds and rain.—*Oester. Chem. Ztg.*, in *Pharm. Zentralh.*



Nuclein or Climate: Which Did It?

WE print below a personal account of one of our friends on the firing line, who describes graphically his own experience with the dreaded Great White Plague. We may talk wisely and give sage counsel to our patients; but when the matter comes home to us as closely as it did to Dr. Steele, we forget our medical lore and wisdom, and become "just patients," on the lookout for anything that will help us.

The doctor had pneumonia in February, 1909, and several relapses of the same affection, developing pulmonary tuberculosis. (By the way, the pneumonia may have been tuberculous itself.) Living in Santa Fé, the high altitude caused him to have a hemorrhage, which returned two weeks later and caused extreme prostration. The doctor eventually went to Artesia, N. M., and under date of February 11, he wrote to us as follows:

"Well, Doctor, I have had a fight of it, but I feel I am on the mend. After I had my last hemorrhage October 27, I seemed to gain for a while but relapsed and by Thanksgiving I could barely walk 200 feet for my meals; my temperature when resting was 99.4° F., but on the slightest exertion it would jump up high. At this time I used two doses of nuclein, eight drops hypodermically; the first dose raised my temperature to 99.8° F. Next morning I repeated and when the temperature went up

to 101° or higher, I discontinued the remedy, for I felt that I could not take it. My temperature then went each evening a little lower than before, the sputum lessened in amount, and I felt somewhat better for a few days. Soon, however, the temperature began to increase again. I tried another dose of nuclein with the same results and with a burning of the skin added.

"By this time I was getting in bad shape, had lost some more blood and was losing flesh and strength very fast. I told my friends here that there had to be something done or I was going to 'cash in' soon. I felt as though it was not long, either. I got some triple arsenates with nuclein out of my case and tried it at bed-time. At first this increased the temperature a little and after four or five doses I tried the hypodermic again. I took it at about 5 p. m. and that night I lay in a bed of needles and never closed an eye; to add to it all I was here among strangers and in a shack by myself, and it all made me very blue. I made up my mind that I might just as well go one way as another, so I continued to use the nuclein every other evening, and while I could not sleep, it did not produce such marked reaction. After a few days I thought I could notice some improvement, therefore I kept right on and the temperature rise began to come later each day and to be less high. After a while my friends no-

ticed that my face had more color. Before this I had lost all of my color and strength and I could hardly talk. Well, to help it all out, I received a fine Christmas present: my wife and only child arrived at 1 a. m. at my shack. She was much pleased with my condition.

"One of my friends came in one morning and wanted me to go and see his wife, if I thought it would not hurt me. I was still in bed and told him I would go over as soon as it warmed up a little. This was about the second of January. My wife hitched up the horse and I went to visit that patient and I drove as far as would be around two squares and it did not seem to hurt me. This was the first time I had been in a buggy since Nov. 10 and then my temperature had gone to nearly 102° F. A few days later I was weighed and found my weight 142½ pounds, while on December I could not have weighed more than 125 or 128.

"Here is my condition now: I drive every day, my face has more color in it, I sleep better, eat very well and I am gaining fast and feel as though I had a chance with the rest of them now. Before I commenced to use the nuclein I raised from three to eight ounces of expectoration a day. Now I don't spit up more than one to two ounces and do not have such hard coughing spells as formerly. I feel certain that if I had not commenced the use of nuclein or gotten something else to help me I would have been in my bed some time ago.

"We are preparing to travel around this summer and spend the hot months in the mountains, fixing up a camp wagon and other things to make us comfortable and go and come as we please. I feel that I should not get into the high altitude on account of the hemorrhagic tendency. My Ohio friends want me to go to Colorado Springs to the Modern Woodman Sanatorium, but I feel that 6,000 feet is too high for me. We are 3,300 feet above the sea level here and

I can get into the foot-hills of the mountains and not get over two to four hundred feet higher than I am here. By going as we shall, the change will not affect me as it would to make this change on cars.

"Doctor, I have learned lots about tuberculosis here that I never saw in Ohio. Where I was practising every patient that contracted tuberculosis died unless he went away and stayed away. Lots of tuberculous patients leave for the West, get homesick and return, soon to pass to the Great Beyond. I used to blame them for coming back, but nobody knows what it is to leave home, friends and all, to go among strangers and have the burden of caring for oneself, and of seeing one's strength leave him more and more daily."

J. H. STEELE.

Artesia, N. M.

We shall watch with interest and sympathy for more and, we trust, increasingly favorable reports from this brother. He seems on the road to recovery, thanks to the nuclein (which seems to be accomplishing so much in these cases), the climate of the Southwest and the love and help of the good wife. May he continue to grow stronger and eventually become entirely well.

ROUND TABLE ON THE TUBERCULOSIS PROBLEM

In CLINICAL MEDICINE for May, page 578, we submitted to our readers a number of questions on various subjects connected with tuberculosis and the tuberculous. During the same month we sent a set of other questions to more than one hundred specialists in tuberculosis. These questions concerned subjects which can only be solved from the knowledge gained by large experience. Thus far we have received only a limited number of replies to these interrogatories. Nevertheless, while the number responding has

been small, the ideas presented will prove helpful. They have been assembled and are here presented in a very condensed form.

There is nothing surprising in the fact that the opinions vary on certain points, and we shall attempt to reproduce for our readers the important facts as well as the differences of opinions.

"Question 1. What cases of tuberculosis are adapted for climatic treatment away from home?"

The selection of cases for climatic treatment depends on individual factors. The most favorable cases are those that are also favorable for home treatment, that is, early cases and latent advanced cases. Dr. Ashmead insists on the selection of a dry climate for cavity-cases. Drs. Ballard and Pottenger point out the very important fact that patients sent from home must have sufficient means for support. Drs. Petit and Placak favor the home climate for tuberculous patients.

"Question 2. What is your opinion on the drug-treatment of tuberculosis? How do you treat cough in consumptives?"

While tuberculosis as such is not amenable to drug-treatment, there are constantly conditions arising in the tuberculous which must and can be met with properly selected remedies, although very often such conditions can be overcome by careful management. In any case, the drug-treatment in tuberculosis is largely symptomatic.

Cough requires perhaps the most careful attention, and we must not forget that it is a physiological phenomenon which has the purpose to remove infected and objectionable material from the bronchi; on the other hand cough is very frequently a bad habit and can be overcome by training the patient's will power. If the cough is persistent and disturbs the patient's rest, the milder expectorants and sedatives (codeine, heroin) may be indicated.

"Question 3. The dietetic management of tuberculosis patients?"

The diet suitable for well persons is in general also suitable for consumptives. Forced feeding in the sense of stuffing is condemned unanimously, since, as Dr. Cladmon puts it, "*it is what the patient digests that counts and not what he eats.*" While a conservative gain in weight is favorable, the mere fattening of patients is not only useless, but often productive of harm.

"Question 4. What, in your opinion, is the best treatment for hemoptysis?"

The best treatment of hemoptysis is rest; opiates may be needed. Dr. Pottenger shows the necessity of differentiating between hemoptysis from an open vessel and congestive hemoptysis. In the first variety the blood pressure must be lowered; in the latter the heart and circulation need stimulation. Ergot is condemned almost universally. Atropine, also the nitrites, often are useful.

"Question 5. What information can you give on the influence of climatic and meteorologic conditions upon the occurrence of hemoptysis?"

High altitudes, oppressive days with high degree of humidity, sudden meteorological changes, appear to favor the occurrence of hemoptysis.

"Question 6. Is hemoptysis always a serious prognostic sign?"

In early stages hemoptysis may be a favorable symptom, in cavity-cases with rapid softening it is of more serious import. In the third stage it generally means the beginning of the end.

"Question 7. Have you any experience in the use of nuclein?"

Dr. Ashmead has always used nuclein with favorable results, and Dr. Cladmon for many years with unquestioned benefit.

"Question 8. What cases may be successfully treated at home? What cases will do better in sanatoria, and why?"

The sanatorium treatment has the decided advantage over the home treatment

that the entire management of the patients, which in tuberculosis is of the highest importance, is under the complete and constant control of the physician. Provided the financial status of the patient is good and he does not unduly suffer from nostalgia, a course in a sanatorium is unhesitatingly to be recommended not only for its therapeutic but for its educational effect. As a general proposition, a sanatorium situated in a climate as like as possible to the home climate is to be preferred.

As to the subquestion, "What cases will do better in sanatoria, and why?" early cases are more apt to be favorably influenced by any treatment. For far-advanced progressive cases invalid homes should be founded where they might be cared for and the danger of dissemination of the infection be minimized.

Theoretically all patients should do well at home if they strictly obeyed the rules and the outside influences could be regulated for the best; this not being feasible, sanatorium treatment offers decided advantages.

REPORTS OF EXPERIENCE WITH CROTALIN

In *The Boston Medical and Surgical Journal* for April 15, 1910, Dr. Thomas J. Mays of Philadelphia published a preliminary report on his success with crotalin in the treatment of certain wasting diseases, notably pulmonary phthisis.

Crotalin is the dried, yellow, scaly granular residue of evaporated rattlesnake venom, and is soluble in water. The remedy was employed hypodermically in the following manner:

Crotalini	gtt. 1
Glycerini	m. 100
Aquae destillatae	m. 400

Two and one-half minims of this solution represent 1-200 grain of the venom, which Dr. Mays held to be the minimal dose. He assumed that the improvement in the pulmonary cases which he described was mainly due to the ac-

tion of crotalin, although the exact mode of this action could not as yet be explained.

In *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* for December, 1909, the same investigator contributed a further paper on crotalin, in which he discussed its action, especially in disturbances of the respiratory nervous system. It is well known that Dr. Mays attributes pulmonary phthisis to neuroses of this nature. (See Thomas J. Mays' "Pulmonary Consumption," 1901).

The latest contributions from Dr. Mays appeared in *The Boston Medical and Surgical Journal* for January 13, 1910, and in *THE AMERICAN JOURNAL OF CLINICAL MEDICINE* for April, 1910, p. 210. These deal mainly with the administration of the remedy.

Shortly after Dr. Mays' first paper crotalin was prepared in tablet form for hypodermic administration, in response to the requests from practitioners throughout the country. So far as we are aware, crotalin has not been tested in any laboratory on animals and we are therefore not in a position to account for its peculiar action. However, we present herewith abstracts from clinical reports, both favorable and adverse, from physicians who have used the remedy. The time since its introduction is all too short to permit of anything like a positive opinion regarding its value being ventured, and we refrain from doing so, leaving our readers to draw their own conclusion.

We would say, however, that crotalin is an albuminous substance and heterogenic to the human species. As has been determined by investigations in immunity the introduction of a heterogenic albumen into the circulation produces a condition of allergy, which may manifest itself by fever, pain, malaise, etc. We see similar reactions follow the administration of tuberculin, of nuclein, and other proteids.

Is it too far-fetched to suppose that the action of all these substances, being

similar, must be subject to similar or even like biological principles? We must leave the question open, and do not hesitate to do so, since even in the instance of tuberculin twenty years of close and extensive study have not succeeded in supplying an unobjectionable explanation of its action.

These reports on crotalin are all from physicians in general practice and we have endeavored to select representative ones from various parts of the country as well as on various classes of patients.

In the following we give brief excerpts from these letters, conveying the essence of the matter.

Dr. Frederick Gaertner, Pittsburg, Pa., writes concerning the use of crotalin, as follows:

I am using crotalin on ten patients and I find some improvement. However, I am not through with my clinical tests and observations; will also start them on internal administration.

I am elated over the results I am getting in incipient "intraalveolar tuberculosis."

I am fully convinced that crotalin cures incipient cases of acute intraalveolar tuberculosis; in fact, the results obtained by its use in such cases were decidedly greater and more marked than by the use of tuberculin.

In ulcerative tuberculous conditions of the lungs I can also record marked improvement, especially in cases that had the opportunity of securing open-air conditions.

From Dr. F. W. Hammond, Lawton, Oklahoma, we received this report:

I had an old asthmatic under treatment, a man of about forty-five who had been asthmatic for years. Came from the Dakotas and consulted me on account of some polypi in both nasal cavities. After some unsuccessful local and general treatment I gave him three injections of crotalin at four- and five-day intervals, the first injection being 1-100 grain. It made the arm very painful and sore for a day or two each time and there was some swelling. There was no relief at all that I could see. The man quit coming and I have not seen him since.

Dr. G. R. Pogue, Greeley, Colorado, wrote, some months ago, that he was not yet in a position to give an opinion of any value in regard to crotalin, but said:

I certainly do get a decided temporary relief following an injection, but so far have been unable to work out the action. The

reaction following 1-200 grain is always very severe, too much so for continued use, therefore I reduced the dose to 1-1000 grain, and while the reaction is less, I believe the results are just as good as with the larger dose.

A few days ago Dr. Pogue added to the above report the following:

Two cases in the early stage of tuberculosis failed to show any improvement after thirty days' treatment. These same cases have made rapid improvement under "tubercle vaccine," with none of the drawbacks of reaction. I might sum up the subject in a few words: My experience with crotalin in the treatment of tuberculosis and associated infections has not been satisfactory.

This report is from Dr. G. H. Grey, Grafton, Nebraska:

I gave my patient (a man with tuberculosis involving the lung to cavity formation and the larynx until he suffered so that he repeatedly told me he would rather starve than try to swallow) 1-200 grain of crotalin as the initial dose, and followed this with 1-400 grain each day for a period of ten days. The drug gave a marked local reaction in the forearm of the right side, i. e., the side first used. I had no trouble on the left, although he complained of tenderness at all times and a sharp stinging pain immediately following each injection, which, however, was greatly and immediately relieved by massage for five minutes at the site of the injection.

The fever improved from the second day and the throat from the first, so that on the third day he was able to eat a full day's ration, including a "square meal," and this with little pain. At the end of the first week every improvement came to a standstill, and, without any special change, he died of hemorrhage of the lung on the tenth day.

This patient had seemed to gain in strength for the first week, but whether it was due to the medicine, directly, or to the extra food eaten, I could not determine. I think it due to the food which, I think, he was able to eat because of the crotalin taken. This, of course, makes the drug responsible, too, for without it, I am convinced, the patient would have died of starvation soon, for at that time, he had eaten nothing for two days.

Dr. E. N. Hawley, Norwalk, Ohio, cannot say that his experience has been at all satisfactory. He writes:

Case 1. Female, 60 years, neurasthenic, cardiac disturbances (nervous), insomnia, multiple neuralgia, general weakness. Crotalin was exhibited in doses of 1-400 grain at intervals of two days. Number of treatments, six. No improvement. Patient discontinued treatment on account of the pain caused.

Case 2. Female, age 50, neurasthenia, nervous cough and asthma, cardiac palpitation,

insomnia. Treatment: Crotalin, grain 1-400, two doses at intervals of two days. Then 1-200 grain at like intervals. Two weeks' treatment showed marked improvement.

Wine of digitalis, and sodium bromide were also exhibited during the treatment with crotalin. Insomnia, palpitation, asthma, cough, all improved. Crotalin was withdrawn after two weeks' use, digitalis and sodium bromide being continued. Patient complains bitterly of soreness of arm caused by crotalin.

Case 3. Female, age 42, neurasthenic, insomnia, nervous cough and asthma, right-lung pleura adherent over surface above which scirrhus breast was removed one year or more ago. Multiple neuritis. Eight treatments with 1-200 grain crotalin at intervals of two to four days. Vibrator to spinal column. Some improvement (not marked), cough and asthma no better. Patient objects to treatments on account of the pain.

Case 4. Female, age 40, neurasthenia, insomnia, multiple neuritis, weak, anemic. Four treatments with crotalin, 1-200 grain. No improvement. Patient refuses further treatment on account of suffering caused.

Case 5. Female, age 30, height 5 feet 5 inches, weight 115 pounds, bronchitis with bronchial asthma and severe cough. Eight treatments with 1-200 grain crotalin, at intervals of two days. Patient improved. Coughs much less, asthma appears only at intervals of eight and ten hours and remains only one or two hours. General feeling better. Ceased treatment on account of pain.

Case 6. Male, aged 21, tuberculous lungs and cervical glands. Temperature 101° F. mornings, 103° evenings; pulse 110 to 120. Cough and expectoration. Confined to bed, appetite lost, weak and anemic.

Treatment: Crotalin, 1-200 grain at intervals of two days, inhalations of oxygen passed through eucalyptus and pine-needle oil, equal parts. Forced feeding, fresh air, elimination. For cough, sedative and expectorants. Under treatment ten days and still continuing. Temperature reduced two degrees, both morning and evening; appetite improving, general condition improving.

These are all the cases treated so far. Not a typical crotalin-case among them except the fifth and sixth. There is much complaint of the pain produced, and this is a serious feature of the treatment.

Dr. J. A. S. Howell, Elgin, Illinois, reports as follows:

I have used crotalin in two cases, one of tabes and one of pulmonary tuberculosis. I started with 1-200 grain hypodermically, twice each week, and increased to 1-100 grain, at which point I had to discontinue for the time being, as the local reaction was too great. I believe the dose should be decreased as soon as any local reaction occurs, and 1-200 grain will be found all that a weakened patient will stand. In the tabes-case

the pains disappeared and walking rapidly improved. Now, at the end of two months, since the commencement of treatment, the pains are beginning to return but the general condition and the walking remains much improved. The patient is a woman and refuses more injections. I have been giving 1-200 grain twice a week by mouth, but can not see that I get any effect. This patient was also on chromium sulphate, 40 grains daily.

My case of tuberculosis ran to 100° and 101.6° F., most of the time. Glands of neck also involved. Put her on glycerophosphites, and ordered guaiacol applications to the glands—cleaned out the crypts of the massive tonsils with phenol (on probe), and started with 1-200 grain crotalin hypodermically. The patient has gained strength and six to eight pounds in weight, and the temperature is dropping steadily, being 99° F. on September 23, in the evening. Had the same trouble with local irritation on running the dose up to 1-100 grain, and 1-150 grain was all this patient could bear. Have been well pleased with the results, but would suggest the 1-200 grain dose two or three times each week until it shows failure to work; only then increase it. I shall continue to experiment with this preparation.

Dr. J. J. Deertz, Northville, South Dakota, reports as follows:

I got some crotalin tablets about two or three weeks ago to use on an asthmatic patient and have had good success with them. They stopped the cough completely and relieved the dyspnea thoroughly. I directed the patient to come in once a week for the injections, but found that the effects lasted only about five or six days, so I have to administer the remedy that much oftener. The first injection was quite painful and caused considerable swelling, but the second, and the third, which I have just given, are not so severe; the first one scared me somewhat, but it is coming out all right. It left a hard lump at the site of the injection for nearly two weeks. Shall know more about it later.

Dr. Lewis H. Brown, Purdy's Station, New York, reports his experience in two cases:

I have had only two patients who would try crotalin injections; both males, one aged 29, and the other aged 45 years, both undoubted victims of tuberculosis. Each has a cavity in the left lung, each has typical exacerbations of temperature, with chills, extension of rales over fresh lung-tissue, and marked rise of temperature during these subacute attacks. At all times in both these cases there is a rapid pulse, temperature not going higher than 99.4° F. each day, except during exacerbation.

Case 1. Mr. B., aged 45, has had frequent hemorrhages, is always ailing, asthmatic,

coughs and raises continuously, has chronic catarrh, poor sleep, bad appetite, both lungs affected (left one most), cavity in left lung, no marked sweating, occasional chills, slight daily rises of temperature, very nervous, anxious to work and struggles on working, keeping books. Spent two years in Colorado for his health, returned no better eighteen months ago; has tried everything and has no faith in anything, but is willing to try.

Case 2. Mr. K., aged 29, cavity in left lung, marked evidence of trouble in apices of both lungs, frequent subacute attacks, occasional night-sweats, very nervous, but generally sleeps well, has never had a hemorrhage. Has been very weak, not fit for any effort, though willing enough, has been losing health for two and a half years, has known that he is consumptive for over eighteen months.

I have attended both these cases for more than a year, and I know them well. I have tried all the usual and many unusual things with them, with ups and downs, mostly downs, till I persuaded them to let me try crotalin.

I began on September 28, 1909, with hypodermic injections of crotalin, 1-200 grain, on posterior surface of forearm with very marked and distressing local reaction, but both patients managed with some effort to keep at their work. I continued the administration of 1-200 grain twice a week till the ninth of October, when I increased to 1-100 grain twice a week; again on the 21st of October I increased to 1-66 grain. This dose I have continued.

At each successive injection I got less and less local reaction. I attribute some of this result to injecting fairly deeply after the first two or three injections, but I got apparently no other effect whatever till I increased to 1-100 grain (on October 9th).

In Mr. B's case (he is, if anything, the worse of the two) there was a general improvement in strength, in appetite and sleeping, but so little that he almost decided to stop the treatment. So, in desperation, on October 21, I used one of each tablet, 1-200 and 1-100 grain, at the same time (1-66 grain), and have continued this ever since. I cannot find any stethoscopic improvement, but the man thinks he is stronger. However, the very fine weather may be helping him. His friends think he eats and digests better. In this case I cannot say that I see any improvement that could be fairly attributed to the crotalin alone. He is continuing all his other remedies and will continue crotalin, for the present at all events.

If I had had only this one case I should have been discouraged as to crotalin.

Mr. K's case, aged 29, who is practically in the same condition as Mr. B., only perhaps not quite so advanced. I got no results other than local reaction from the 1-200 grain. So on October 9 I increased him also to 1-100 grain, giving injections deeper, and in his

case, also, I am of the opinion that when the injection is given deeply there is less local reaction. (In both cases I inject in alternate forearms.)

A few days after beginning the 1-100 grain doses in this case improvement began to be marked, but as I was increasing the dose in Mr. B. on the 21st of October, I decided to do so also in this case and on that day I increased to 1-66 grain crotalin, and have given it twice a week ever since. He has less cough, sleeps better, eats better, digests better, has less catarrh, feels and apparently is stronger, is putting on a little flesh, looks better, and has left off most of his medicines. By the stethoscope I cannot find any improvement, but in all other respects there is evidence of improvement. If I had this case only I should feel elated. I am trying to get some other patients let me try it, and if I do I shall report later.

In spite of improvement in Mr. K., I confess I am not oversanguine.

Both my cases are better and one markedly so, but in a long practice I have often found tuberculous patients pick up temporarily on any new treatment.

I think crotalin should certainly be given a trial in every case, and I am trying hard to get some others to use it.

I found no improvement with small doses and very little until I got up to 1-66 grain.

Under a quite recent date Dr. Brown writes:

The two cases detailed above are doing splendidly. Mr. K has dropped practically all remedies except an occasional aperient. Has 1-66 grain injected every eight days; only a few rales can be heard in apex of left lung. Mr. B., if anything, did better than Mr. K., because he was not so far advanced. The cavity is contracting. He also has 1-66 grain every eight days. There is practically no local reaction now. Neither will let me discontinue the treatment because they are so satisfied with the results.

Give big doses; inject deep; and don't get discouraged if immediate results are not secured. In Mr. B's case I nearly discontinued because there seemed to be no result. I am glad I did not and so is he.

It is difficult to draw any definite conclusions from the foregoing reports. We have also heard from many other physicians, but the preceding are fairly representative. Certain it is that crotalin is not a specific remedy, though it is undoubtedly of benefit in some instances. It appears to produce a certain tissue reaction and to have a beneficial influence on the cough. The pain which it causes is a serious bar to its gen-

eral use. It is our impression that the remedy does not have so favorable an influence as has nuclein, which is a physiologic remedy in a marked degree. One fact is very evident, namely, that not any remedy which we may use in tuberculosis can influence the disease condition favorably unless all factors connected with the general management of consumptives are carefully considered, and unless the patients submit unconditionally to the dictates and regulations of the physician.

LABORATORY INVESTIGATION OF CROUP

We are making an investigation of the bacteriology of croup. Any reader of CLINICAL MEDICINE has cases of this kind, whether diphtheritic or not (preferably not) we shall appreciate it very much if he will send us swabbings from the throat for examination. These may be obtained with clean absorbent cotton, which immediately after the sample is obtained should be placed in a wide-mouthed bottle (which has been sterilized by boiling) and carefully corked. We will furnish culture outfits on request.

Your hearty cooperation is invited. We feel sure that out of this investigation there will come information of value to all of us.

THE PROCTOLOGIC SOCIETY AND OTHER ST. LOUIS EVENTS

Among the other societies which meet in St. Louis at the same time as does the American Medical Association, is the American Proctologic Society, which foregathers at the Planters Hotel, June 6th and 7th. We have seen the program and it is a mighty good one, containing the names of such well-known specialists as Pennington, Gant, Tuttle, Mathews, Martin, Jelks, Cook and Adler. Any of our doctor friends who are in attendance upon the great medical round-up of the

year, as many will be, should drop in at this meeting, that is if they are interested in rectal diseases.

By the way, we hope to have the pleasure of meeting many readers of CLINICAL MEDICINE in St. Louis this year. Drop in and see us at the Exhibit Hall, where some of us hope to have the pleasure of entertaining friends. Incidentally, I might say that we are going out on the Chicago & Alton from Chicago, and hope to meet some of our friends *en route*. If we can be of service to any one in securing sleeping-car service, or otherwise, just let us know by letter, telephone or in any other way. We are yours to command.

WHAT LED HIM TO ALKALOIDAL THERAPY

While sitting by the big pine fire, ten miles from home, "waiting" and enjoying a copy of CLINICAL MEDICINE for January, a constant companion in these circumstances, I was impressed with the article by Dr. Waugh on "Therapeutic Progress."

I have been gradually drifting, or more properly, forced into the use of the alkaloids in my desire to get results. Many times have I diagnosed my cases, given the remedies indicated and my next visit found no signs of the drug-effects I had been taught to expect. These observations, together with the experiences given by my fellow doctors using the combination of 10-drop doses each of tincture of aconite, digitalis and gelsemium, given constantly for two or three weeks, with an occasional acetanilid compound tablet, in cases of continued fever, convinced me that these remedies could not be relied upon.

Reading THE CLINIC years ago, and noting the results, turned me to the alkaloids, I tried aconitine, defervescent compound and dosimetric trinity. While finding it very hard to get the people to understand the results desired, I now

definitely know what to expect at my next visit. I can see the results of the little granules. This modern medication has brought great satisfaction to me in my daily work.

In regard to the use of calomel in our south land, I find the calomel users here, taking as they do 8 to 20 grains often repeated, a lot of sallow, complaining patients, with indigestion. They are frequent visitors to my office. I think we depend too little on podophyllin and other hepatic stimulants.

In this part of Alabama we find hookworm disease very prevalent. I should like to report a little later on several cases now under observation.

P. I. HOPKINS.

Clanton, Ala.

[The same thing which led Dr. Hopkins to alkaloidal therapeutics has influenced thousands of others. The results produced by the little granules are real, not fancied, as the discriminating man soon learns.

The doctor is right about the calomel. There are few more useful remedies, but it should not be abused. We hope to have the reports of those hookworm cases. May we not have some photographs of patients, to be used with them?—Ed.]

CHILDBIRTH AFTER SIXTY

On page 330, March number of CLINICAL MEDICINE, I note a case of pregnancy reported by Dr. B. F. Archer, Sweetwater, Texas, "five years after the climacteric had been established." Also another case where a woman became pregnant after she was 70, quoted from *Journal de Medicine de Paris*, Nov. 26, 1881.

As the request follows for similar cases to be reported, I will give you the case of Mrs. Thomas Tanday, of Todd Co., Kentucky, three miles from the birthplace of Jefferson Davis (Fair-

ound), one mile from my father's home. I was a frequent visitor in this family, and I was then (in the early fifties) "on my first legs," and their youngest children were twins (Misses Lou and Mandy) were like myself, "sweet sixteen" and sweethearts too.

But soon, I well remember, there was a great sensation in the neighborhood, and it was "all the talk" of the regions round about, for my contemplated mother-in-law brought forth a fine boy, "after she was past 60." Dr E. T. Stewart of Fairound, now 80 years of age, and possibly a very few survivors in that section, could vouch for the correctness of this remarkable incident, if need be.

F. B. MOODIE

Lake City, Fla.

CHILDBIRTH AT THE AGE OF TEN

From one extreme we go to another. A few weeks ago (in April) the Chicago newspapers printed reports of the birth of a child to a child-mother, a negress, at the Cook County Hospital. The story, as it appeared in the *Chicago Journal*, was as follows:

10-YEAR-OLD GIRL IS YOUNGEST MOTHER IN U. S.,
PHYSICIANS SAY.

CASE OF ANNE EPPS, VISITED BY STORK SUNDAY,
AMAZES DOCTORS—HER MOTHER GRAND-
PARENT AT 23.

The youngest mother who ever came under the notice of the officials of the county hospital, and perhaps the youngest in the history of the medical profession in the United States, is Anne Epps, the 10-year-old colored girl, who on Saturday gave birth to a 6¼-pound child. The baby's maternal grandmother is Mrs. Minnie Kendricks, 319 West Fifty-second St., who is herself only 23 years of age.

According to Charles A. Happel, warden of the county hospital, many cases are recorded of girls who have become mothers at the age of 12 years, but this is the first instance on record in Cook County where a child of ten has been visited by the stork.

Mrs. Kendricks, Anne's mother, was only 13 years of age when Anne was born, and this, physicians say, probably had a great effect on the early maturity of her daughter.

Anne was brought to the county hospital on January 27 by officers of the Juvenile court,

and steadfastly refuses to tell the name of the father of her child.

[This record had been beaten already. In the June, 1908, number of *CLINICAL MEDICINE*, page 798, Dr. V. I. Pittmann, of Cederetta, Mississippi, reported a case of childbirth, occurring in a colored child 9 years and 24 days old. The child-mother was only 37½ inches high and weighed 75 pounds. The baby weighed 7 pounds. So far as we can ascertain this is the record for this country.—Ed.]

PALMER WROTE IT

Of course, we ought to have known it all the time. That is, that our free-lance, *yet* poetical friend, Dr. George Thomas Palmer, of Springfield, Ill., was the author of that poem, "Discussing the Meeting," which we published in April *CLINICAL MEDICINE*, page 442. Who else has the knack of saying such witty things and saying them so well? We refuse to accept responsibility for the hiding of the authorship of this poem. We borrowed it from some fellow, and the other fellow borrowed it from Palmer, and now the goods are restored to their proper owner.

PUERPERAL INFECTION WITH A GONORRHEAL HISTORY

Having been a member of your family for the past twelve years and seldom breaking into print, I am going to ask you for information. Within the past year I have had three cases of puerperal fever, or sapremia, where there was a previous history of gonorrhea. In all cases every aseptic precaution was taken and in the last case the baby was born before any examination could be made. All three cases recovered under proper treatment.

I would like to know the experience of other members of the family, and if there are any prophylactic measures one

could adopt that would lessen the number of these cases. I have tried vaginal douches of various antiseptics without results. Saturation of patient with veratrine and echinacea seems to shorten the course of the fever, or perhaps it is the local measures resorted to.

G. W. HENIKA.

Readstown, Wis.

[Here is an opportunity for members of the family to give substantial help. Let us have a few brief chapters of personal experience. The first thing to do, in such a case, is to establish the diagnosis. If the mother is seen before delivery, samples of the vaginal secretions should be examined microscopically, and if the gonococcus is found the vagina should be swabbed out with a silver nitrate or argyrol solution of medium strength. After infection has occurred vaginal douches as a rule do little or no good, but thorough antiseptic irrigation of the uterine cavity almost invariably yields immediate results as shown by the drop in the temperature, provided there is no streptococcic infection. In addition to this measure, of course, the patient should be thoroughly cleaned out with calomel, podophyllin, etc., followed by saline laxative, and the bowels rendered aseptic with the sulphocarbolates. This measure alone will often cause a temperature to subside in a remarkable way. This being done, it is our custom to saturate the patient thoroughly with calcium sulphide and echinacea.—Ed.]

TWELVE CASES OF VERSION OR TURNING

In an obstetric experience of fourteen years and taking in about 300 cases I have had occasion to practise version on account of transverse presentations twelve times. In ten of these cases I have done internal or podalic version by bringing down a foot. In two cases,

where the waters had not drained off, I was able to turn the child by external version alone.

In my first case I was called to a woman who had been many hours in labor, the waters had long been drained off and the uterus was firmly contracted around the child, which had evidently been dead some time. I was obliged to call in another doctor to assist me and by our combined efforts we succeeded in turning and delivering the child. The mother made a good recovery after having a sharp attack of peritonitis, probably caused by traumatism.

The next case was almost identically similar, but I did not call an assistant this time. I worked from 1 p. m. till 6 p. m.—worked until I had not a dry thread on my body, but I turned that child myself and delivered it without injury to the mother. The child was dead, of course, but the mother made an excellent recovery and did not develop any complication of any kind. I am happy to say that I have never had another case as hard as this one.

In three instances I had to turn the latest-born child of a pair of twins. It has seemed to me that the youngsters tumbled out of their proper positions through having too much room in the womb after their mates were born.

I had always considered external version performed without assistance as next to impossible, but by experience in two cases I find that if the child is small and the bag of waters large it is entirely practicable. In cases where a midwife is confronted with a transverse presentation she is very likely to try to deliver by pulling on the arm, which is the reason Emperor William of Germany has to carry a paralyzed left arm through life.

WM. M. GREGORY.

Berea, O.

[What say other readers of CLINICAL MEDICINE as to the use of performing and the practicability of external ver-

sion? A few short "remarks" on this subject will be acceptable.—ED.]

SOME OBSTETRIC CASES IN WHICH ATROPINE, VERATRINE AND OTHER REMEDIES WERE USED

These cases all occurred in less than eight months of a not very extensive country practice.

March 19, '08—Mrs. B., age 26, primipara, six months pregnant. Health always good. Somewhat constipated for years. I prescribed for this during the early months of her pregnancy. Since that time by eating fruit and laxative foods her bowels have kept in good condition. Has not even had nausea except when taking medicine to move the bowels. Sunday, Mrs. B. had considerable pain in the lower abdomen, which she attributed to the bowels as she had had diarrhea since Wednesday, caused she thought, by eating watercress. Pain intermittent and due to uterine action. There was slight headache, no swelling of ankles then or at any time. Left a few "chlorodyne" granules to quiet the bowels. Monday learned by telephone that Mrs. B. rested and was feeling much better. Tuesday about one a. m. was called to come immediately; found that she had rested well Tuesday night until about one o'clock, when she got up to urinate and fell to floor in a convulsion. She was comatose, no edema of any part of the body. Convulsion repeated shortly after my arrival. Gave a hypodermic of H-M-C and veratrine, put the patient in a warm wet pack, and gave two drops of croton oil in a teaspoonful of olive oil on the back of the tongue. Told the husband it was a serious case and asked for counsel. Counsel was delayed several hours and before his arrival patient had another convulsion. Repeated the above medicines.

On arrival Dr. H. endeavored to make a vaginal examination but the patient was so restless when disturbed that he could

do nothing but ascertain the condition of the cervix which seemed somewhat shortened. Endorsing all that I had done and advising a continuance of the treatment Dr. H. left, with the understanding that he be called if there was any necessity for operative interference.

Whenever the patient became restless I repeated the H-M-C and whenever the pulse increased in frequency or tension I gave veratrine hypodermically. There were no more convulsions. Tuesday night patient became very restless, complained that her bowels wanted to move and got up several times without result. I thought it probable that her pain was uterine and told her husband so. About midnight her baby was born. Fetus, placenta and everything came at once. The membranes were found quite intact when I put the product of conception in the basin.

Not until Wednesday afternoon did the patient become conscious. With the exception of an acute bronchitis with most profuse expectoration, Mrs. B's convalescence was all that could be desired.

Case II. Mrs. H., eighth confinement. Pains began between 8 and 9 p. m. I reached patient's home about eleven. Patient was sitting up and flowing quite freely, had flowed so much that "everything got black" and she came near falling. I made her bed ready, got her to bed, washed the vulva with creolin solution, examined and found a placenta previa.

I put a white napkin to the vulva and gave a hypodermic of atropine. Napkin was saturated in very short time. Repeated the atropine in fifteen minutes and continued to do so until the throat became dry. After the second or third injection the bleeding lessened very perceptibly and finally ceased entirely.

Baby was born Friday morning about ten o'clock but lived only about twelve hours. I attributed its death to the ante-partum hemorrhage, which I thought

severe. The blood had soaked through the patient's clothing and ran at least three feet from her chair and formed a pool on the floor.

Was the cessation of hemorrhage due to the atropine or not? I do not know but I do know that the bleeding ceased after the atropine and at least ten hours before the labor terminated. The only other medication was a half dose of H-M-C to ease the nagging pains and give the patient rest; this after the bleeding ceased. Puerperium normal.

Case III. Mrs. F., fifth labor, last child three years old. First stage long, pains occurring at long intervals. Second stage pains at long intervals and not of much force. Everything normal until just as the placenta was delivered when the patient said, "I am going to faint," which she did.

I gave a hypodermic of atropine, glonoin and strychnine arsenate, a hot-water douche, pulled the pillows from under her head and gave ergot and aromatic spirit of ammonia by the mouth, and all the time the husband or myself made firm pressure over the fundus. Repeated the hypodermic every fifteen minutes for an hour. The patient vomited the ergot and ammonia. Gave two hypodermics as above during the second hour.

Convalescence satisfactory except that the patient was weak and anemic for some time. Had the same experience with this patient in her previous labor. Am hoping she will not have any more babies.

Case IV. An Indian woman. The husband, quite an intelligent man, tells me that his wife was confined about ten days or two weeks ago. After the baby was born something came out, which the old Indian woman put back but it would not stay. His wife was not able to be up and would I go and do something for her?

Of course, I would. After several hours' ride I reached the Indian camp

and found my patient's trouble to be complete inversion of the uterus.

I gave a creolin douche, a hypodermic of H-M-C and went to work. How long I worked I do not know, but I succeeded in restoring the uterus to its normal condition with my good right hand in its interior. Before withdrawing the hand I gave an intrauterine injection of hot creolin solution. Gave a vaginal douche of same. Gave a dose of atropine and strychnine arsenate by the mouth and left a few doses of these remedies to be given the next day.

The shades of evening were falling as I turned my face homeward, feeling that I had earned the satisfaction that always comes from work well done. The patient had no further trouble. In this case reposition began at the os. I held the inverted uterus in my hand and made firm, steady pressure upward. It was only by bracing my elbow against my knee that I was able to maintain the pressure long enough to overcome the contraction of the cervix, but when it did begin to yield it seemed but a short time before repositoin was complete. How would I have managed this case without H-M-C, as I had no one to help me but the husband?

Case V. Mrs. C. Has had nine or ten children. Was called in the early evening and found that Mrs. C. had been taken suddenly with hemorrhage which had been so profuse that she felt as though she would faint. I found the bleeding still quite free, with regular uterine action. While I was questioning the patient she became very pale and said, "I am going to faint." I gave a granule each atropine and glonoin by the mouth. She vomited not long after and then again became faint from loss of blood.

I gave atropine and strychnine arsenate hypodermically and repeated every fifteen minutes until the throat became dry. No further hemorrhage, pains continued until about three a. m. when the

fetus was expelled into the vagina. No further trouble.

E. COOK.

Sheridan, Nev.

[This is an exceedingly important paper. If atropine stops the hemorrhage of placenta previa the fact should be known to every practitioner. If veratrine stops puerperal convulsions, it must be utilized. These are not matters of choice but of duty.—ED.]

JUST AS GOOD

I depend upon alkaloidal therapy for quick results. Got out of calcidin, and a runner came around and I ordered "some just as good." The test came soon and I got no resuts and came near losing a case before I realized the fault and got busy. Don't let me miss a number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE. It is a big help to me.

J. E. GUERNSEY.

Olin, Ia.

THE NEW YORK STATE HOSPITAL FOR CRIPPLED AND DEFORMED CHILDREN

The New York State Hospital for the Care of Crippled and Deformed Children, the ninth annual "Report" of which lies before us, is to a great extent a recognized center, within a radius of many miles, for the treatment of deformities. Patients, always of the poorer classes, (none other being received) are seen and treated in the outdoor clinic.

In the wards of the hospital 197 patients have been treatd in the nine years of its existence, who remained in the institution an average of one year, seven months and twenty-seven days. About one-half of the deformities treated are tuberculous in nature, and the patients so afflicted are kept in an outdoor shack under the constant supervision of a special nurse.

It is a splendid showing that in the entire nine years there have been no deaths from the acute diseases of childhood among the inmates, and that only three deaths from chronic disease have occurred. An institution which can hold its little patients for such long periods of time is bound to show good results, which are proportionate to the number of patients it can accommodate. The New York State Hospital for the Care of Crippled and Deformed Children is doing a great work and deserves all the support we can give it.

ON THE CAUSES OF FEVER DURING THE PUERPERIUM

Alfred Schmidt (*Arch. f. Gym.* 1909, No. 1, through *Münch. Med. Woch.* 1910, No. 5, has found, in the Women's Clinic in Halle, hemolytic streptococci in 7 per cent of pregnant, and in 68 per cent of lying-in women. Fever in the puerperium can also be caused by other micro-organisms, and is so caused as often as by the hemolytic streptococci. An autoinfection by nonvirulent hemolytic cocci which were present *ante partum* is improbable, and virulent cocci were never found before confinement. Gonorrheal fever always depends upon an autoinfection, and septic fever is in most cases so caused. A virulent infection can only then occur if at the moment when a wound is produced virulent germs are present at the place.

By the way, this is contradictory. If virulent germs were never found *ante partum*, how can they be present at the moment when the wound is made?

THE TOXICITY OF MAGNESIUM SULPHATE

I must take exception to your statement, page 445, April *CLINICAL MEDICINE*, that magnesium sulphate is not toxic when given by the mouth. Several years ago, when serving as an interne, I was

led to look up the toxicity of magnesium sulphate, after observing an unfortunate occurrence at the hospital. Three cases of poisoning by epsom salt occurred within a few days, produced by large doses administered as enemas. One death resulted and another was barely escaped by prompt action. A brief report of the three cases personally observed follows:

Case I. Mrs. A., age about 23 years, following a clean laparotomy, and recovery from anesthetic, was ordered an enema of magnesium sulphate, oz. 1, water; 1 pint, this to be repeated in four hours. The nurse misread the order and gave 4 ounces of the salt in the enema at 9 p. m. This was retained but a few moments and was followed by smarting and irritation in the rectum. At 1 a. m. the enema was repeated, and this time it was not expelled. The patient complained of the rectal irritation, but otherwise was comfortable. Shortly after the administration of the second enema, the patient complained of thirst, and the nurse left the room to procure fresh water. Upon her return the patient was found unconscious, extremely relaxed, cyanotic, respiration barely apparent. I was called at once. Before I could arrive at the room, less than five minutes, the patient had expired. The body was cyanotic, pupils widely dilated. We were at a loss to account for the death at this time.

Case II. Mrs. B., age about 40 years, operation same day as Case I. Enemas ordered at the same time, to be given in the same manner, by the same nurse. Shortly after 9 p. m. she received 4 ounces of magnesium sulphate in an enema. This was expelled after a few moments. At 3 a. m. the enema was repeated and retained. At 3:30 a. m. I was again called in a hurry and found this patient in almost the same condition as the first—body completely relaxed, cyanotic, pupils markedly dilated, respiration almost absent, pulse

fairly good. At once I began artificial respiration and continued it for three hours. Enemas of strong, hot, black coffee were administered, also heat and brisk massage of the limbs. Patient recovered.

Case III. Mrs. C. a few days after the previous cases occurred was given magnesium-sulphate enemas, each containing one ounce, as follows: Enema at 2 p. m. retained, another at 6 p. m. retained, others at 10 p. m., 2 a. m. and 6 a. m. expelled. Shortly after 6 a. m. patient became quite irritable. At 7:30 a. m. she was found to be stupid, body relaxed, pupils widely dilated, slight cyanosis, respirations very shallow, and pronounced anesthesia; could move limbs with difficulty; could be partially aroused. No thirst and no purging present. She was given plain water enemas, four of which had to be recovered through rectal tube, also passive exercise, and massage of limbs. Recovery in a few hours.

Upon referring to the literature upon the subject I have found that doses of two ounces by the mouth have been reported to have produced death in children and debilitated persons. Our salt was analyzed and found to be all right. I still use magnesium sulphate, both internally and externally, but am careful to see that an overdose is not administered by the rectum and retained.

JAMES C. FERGUSON.

St. Paul, Minn.

[It may be that the untoward symptoms in these three cases were all ascribable to the magnesium sulphate, but from the evidence submitted we must say, "*non demonstrandum*." In the first two cases, both directly following severe surgical operations, the possibility of post-operative complications is not excluded. We do not know the nature of Case III, so cannot make deductions. We do know, however, that magnesium sulphate, in concentrated solution, is ab-

sorbed very slowly, the tendency being for the fluid of the blood to escape into the bowel, the osmotic current in the opposite direction being so weak as to be practically negligible, less marked, in fact, than with a dilute solution. (See Cushny.) The likelihood of sudden death from magnesium poisoning, as in Case I, seems exceedingly remote. The number of cases of magnesium sulphate poisoning reported (when the salt is introduced into the digestive tract) is small, exceedingly small, two only being recorded by Wood, and even these may admit of question.

Dr. Ferguson's cases may be all true magnesium poisoning. We certainly shall not deny the possibility. It undoubtedly is the part of wisdom to exercise due caution, to avoid enormous dosage and if the remedy is not promptly expelled, to use the tube.—ED.]

JOURNAL OF PHYSIOLOGICAL THERAPEUTICS

A month or two ago we called attention to the early appearance of *The American Journal of Physiological Therapeutics*, which has just been floated by our good friend Harrower. It makes good its promises. It is indeed bright, energetic and bubbling over with enthusiasm, and in every way worthy of its brilliant owner and editor. It is published bi-monthly. Price, \$1.00 a year.

We have just learned, however, that there is another *Journal of Physiological Therapeutics*, published in Philadelphia and edited by Dr. Louis von Cotzhausen, who will be remembered by readers of the CLINIC as an occasional contributor in years gone by. While we are not very familiar with this publication, knowing the doctor, we know the journal itself must be good. It is unfortunate that these two publications bear so nearly the same name, but we advise anyone interested in the subject to take them both.

In that way the embarrassment of riches may become a gold-mine of knowledge. Send a dollar to Dr. von Cotzhausen, 1711 Green St., Philadelphia.

GONORRHEA NO PROTECTION

In the February number of *CLINICAL MEDICINE* somebody was quoted as saying he felt sure that a person who had had gonorrhea would not contract syphilis. I beg to say that I have seen several cases where men had contracted both diseases at the same time, a great many more where syphilis followed gonorrhea and numerous instances where syphilis preceded gonorrhea. Of the syphilitics I have treated, I think fully half of them had previously had gonorrhea. I account for the last-named condition in this way: neither disease immunizes against the other and gonorrhea is far more prevalent than syphilis.

S. H. SNOW.

Dalhart, Tex.

TIC DOULOUREUX--TRIFACIAL NEURALGIA

My latest experience with that distressing malady, *tis douloureux*, has been so favorable that I feel impelled to tell the story in *CLINICAL MEDICINE*, though I have but two cases to report.

Case I. Male, age 58, stockman by occupation, came to me for resection of nerve, having received no benefit from medicine and having about gone the rounds of the medical men of his locality. I had just made a couple of nerve resections for facial neuralgia and did not score a very brilliant success in either. I had also just received my new alkaloidal case and had been studying its "potentialities," so persuaded him to try medical treatment once more, which he consented to do. First, I provided for thorough elimination, then gave one granule each of hyoscyamine amorphous, gr. 1-250, and strychnine nitrate, gr. 1-67, every

four hours. This promptly relieved the paroxysms of pain and though this was more than two years ago, he has only had to send once each winter for more of those little pills, the relief being so prompt and complete that he no longer considers the possibility of an operation.

Case II. Female, age about 30. Had had all of her teeth extracted and had received no benefit from that, so her physician had told her she would have to go to the hospital and have the gasserian ganglion removed. I placed her on the same treatment as given in Case I and ordered her to report results, which she did in six weeks, saying the pain was relieved. I gave more medicine and told her to let me hear from her if the pain returned. This was one year ago and I have heard no complaint, so suppose everything is satisfactory.

I have tried hypodermic injections of atropine in the region of the nerve, but without much success. There seems to be something in the action of the hyoscyamine that "knocks the eye out" of the nerve pain every time.

E. D. THURSTON.

Burwell, Nebraska.

[Isn't it time we had a whole chapter of experiences relative to the treatment of neuralgia?—Ed.]

• EXOPHTHALMIC GOITER

I wish to present for your consideration and advice the following case:

Woman, age 35, weight 135 pounds, native-born, light-complexion, well developed, given birth to four children, youngest about five years of age. Family history negative. She first noticed an enlargement of the thyroid gland about five years ago, but it seems that no symptoms that might be referred to it were noticed until about one and one-half years ago. From her description of symptoms, I should judge that all the cardinal symptoms of Graves' disease

have been present for at least a year. She says that about four or five years ago a physician told her that she had tuberculosis and, that as recently as six months ago her spleen was enlarged, although this seems to be normal in size, at present.

She has had, at irregular intervals for the last year, attacks of abdominal pain, with nausea and vomiting, the pain being located at various points in the abdomen. These attacks lasted from one day to a week, when she would get better and feel as well as before. The menstrual periods are regular, the flow lasting five or six days. She complains of frequent headaches, principally frontal, which may, however, extend to the occiput, lasting from one to three days, and which seems not to be relieved very much by any drugs. Malaise, vertigo, palpitation, anorexia, and diarrhea are also complained of. Pressure symptoms are slight.

The patient has lost little if any weight. The enlarged gland extends from just under the clavicle on the right side about two and one-half inches upward and about one and one-half inches on the left side, occupying one-third of the circumference of the neck; it is neither hard nor soft, but firm in consistence. The eyes show a moderately well-developed staring expression. Tremor is pronounced. The temperature at this examination, which was during one of the gastrointestinal attacks, was 99.4° F.; pulse, 120, regular and full; no heart lesion discernable; there was visible abdominal pulsation along the course of the aorta. The urine shows a small amount of albumin, but is otherwise normal.

This is about as clear as I am capable of presenting the case. Altogether, it seems to be a typical case of exophthalmic goiter. I have been practising only about two years and have never personally treated this malady. I have a fairly complete library, and have looked up the subject of goiter, but do not find any-

thing very definite, either in the books or recent literature, that gives me much positive encouragement as to its medicinal treatment.

H. D. RYMAN.

Vernon, Ill.

[This is undoubtedly a case of exophthalmic goiter of the sthenic type. It is due to the continued presence in the blood of any poisonous substance, the toxins of various germs, toxic wastes such as those that accumulate during fatigue, digestive autotoxins, etc.]

Sajous ("Internal Secretions", Phila., Vol. 2, 1907, page 1861) advises "measures to reduce the sensitiveness of the test-organ: the bromides or veratrum viride, and if the case be due to intestinal autointoxication, frequent saline purgation and the avoidance of meat." The most important point is the probability of autointoxication, which must be remedied according to the slogan "Clean out, clean up and keep clean." The iodine, which according to Sajous, is also indicated, is best supplied in the form of calx iodata, because you need not fear any iodism following its use. The diet and its assimilation must be carefully watched, and the heart must be guarded against overwork. Another remedy, recently recommended, and which has given really remarkable results in some cases, is chromium sulphate. The dose is 4 to 8 grains three times a day.

These are likely to be anxious cases and may make the doctor sweat blood. Watch the case closely, Doctor, and report again.—Ed.]

THE DISPENSING DOCTOR AGAIN

I had made up my mind never to say anything more anent the practice of medicine and did not think that I ever might have something to say regarding the practice of pharmacy, but a man's mind is liable to change when the environment seems to demand it. So this

is the excuse for my appearance once again to speak my piece. I am getting to be an old-timer and from my feelings, sometimes, I begin to think that it is time for the old worn horse to be turned out for an extended rest or possibly to let him die a natural death, from starvation or some other lingering mode,—at least that is what most of them get for their devoted and life-long service. But I am degressing and did not start out to write about a horse at all; but, to tell the truth, I am pretty huffy, if not really mad, indeed too mad even to cuss. And it all comes about in this way.

I am past three score years, have been in the medical harness, pulling right up close in the collar, since June, 1877, when I parted from my alma mater, together with a number of others, all of us seeking renown and lucre by following in the footsteps of Esculapius. I for one, of that little band of young men and ladies (and when I say ladies, I mean it in the full sense of the word) am not ashamed of my dear alma mater. Although she was but a small creature and had few advantages, she was a power within herself, and when she reached for an object it was, as a general thing, taken in. Our professors were rustlers from the word go, and none of them ever tried to shirk a duty. Big, whole-souled fellows, ever ready to do an act of kindness to their poor suffering fellow creatures, they were, and you may rest assured that we, as their pupils, were treated as their own flesh and blood—right.

If perchance any of them are still among the living and this should attract their attention, I trust that it may induce them, one and all, to send me a note informing me where they live and how they are passing their declining years. But I am degressing again, and possibly it is well I have done so, for this little eulogy of my alma mater and tutors of years gone by has modified my temper so that I feel like saying something sweet, or at least,

it has moderated to a great extent the temper that was in me when beginning to write.

I obtained my education, what little I have, both academic and medical, within the walls of Willamette University of Salem, Oregon. The literary course was short and uneventful, and so too was that in medicine, and probably many of you who happen to be following this rambling harangue will ask, "What in the name of Jehovah is the old medico trying to get at?" Some of you will vote him a crank and throw the paper down, and think no more about it. But please, Brothers, don't do it, for I will get there in the sweet by-and-by, in fact I am there now.

It is apparent that for the past few years there is a great hue and cry from certain pharmacutists in regard to the dispensing doctor. My vocation is now, and has been since leaving the place in which I obtained my little knowledge, that of physician and pharmacist, practising the one as much as the other, and together and at the same time, having always carried my own medicines, building up my own prescriptions and compounding the same. I cannot say whether it is a common thing for doctors and druggists to be educated together or not, but I do know that this was the case in our school, for those who were taking a Ph.G. course sat along-side of those who were taking the M. D. course, heard the same lectures, attended the self-same quizzes, and recited the same lessons, in so far as the Ph. G. went. Then we, of the M. D. class buckled on our armor and went, farther along. When the final examinations came, the candidates for the Ph. G. degree filed into the same room as the candidates for the M. D. degree; the same questions were placed before us, up to a certain point; we all were required to write; then the candidates for Ph. G. retired, while those for M. D. remained to continue their task for the doctor-title. Now, will some kind and know-

ing person rise up and tell me just why I am not just as capable of practising pharmacy as the chap who learned his pharmacy in the same class and school, or under similar condition? And I wish that kind friend to be able to prove it, aside from merely saying it. You did not devote as much time to the study of pharmacy as the other fellow, and yet I had to pass the examination and make as good a showing as he, if not better.

In my vocation, or rather vocations, I take several journals, pharmaceutical as well as medical, and it is my endeavor to scan them pretty closely for the meat they may contain. It so happened that a few days ago a certain pharmaceutical journal, new to me, came into my hands. Although, as I perceive, it is in its 46th year of publication, I never happened to see a copy of it before, but from the way it tore into poor me, I care little if it ever comes this way again. This particular journal is published by the O. D. Haynes Company, at 90 William St. New York City, and is the issue of the 21st of October, 1909. The particular objectionable article purports to be a selection from an address by President Carter, of the National Wholesale Druggists' Association, and it says that the dispensing doctor is a menace to the public health.

Ye Gods! what are we poor doctors coming too? We can figure out the exact dose that is required to accomplish a certain end, and transcribe the same on a piece of paper and hand or have it handed to the all-wise Ph. G. so that it can be properly compounded and sent out to the doctor's patient. I, for one, cannot conceive of any legitimate reason why the wholesale druggist should be making a kick, for it is his place to sell to the retailer, and the retailer is the fellow that tends or makes an effort to cater to the M. D's., and if anybody has a right to register a kick it certainly is the retailer. And the indications to me are that the tendency of the times is to crowd out

the retailer, both by the doctors and wholesale druggists. Many physicians are now patronizing the jobber. Some even go straight to the manufacturer, not only for standardized goods, as enumerated in the U. S. P. and N. F., but they keep abreast of the times and buy from the various manufacturers who put out not only something just as good but, in our opinion, far superior. The doctors who prescribe the products of the druggists, are the *ladies*, and it is my humble opinion that there is now, and always will be plenty for the pharmacists to do if they will stick to the manufacturing of reliable goods.

As I remarked above, if there is any kick coming against the physician, it certainly should come from the retailer. It is true, that the dispensing doctor will knock out a great many small dealers located in the smaller towns and villages, but in the more thickly populated districts there will still be a goodly call for the lesser dealer.

Now for a few words in defense of the dispensing doctor. The latter generally is located in an out-of-the-way, small borough or village, and sometimes out in the country, at some cross-roads. There is no pharmacy in his neighborhood, the nearest one being perhaps, many miles distant. The doctor is called hastily, sometimes in the middle of the night, to go to the relief of one in distress. Hastily he arranges his armamentarium and darts out into the dense darkness, and after numerous adventures, arrives at his destination. He finds the darling little one, or perchance the father or mother, in a state of collapse (I have been in that situation more times than once), and something must be done, and that P. D. Q., or that poor soul will be out of its earthly shell and gone to sport with the angels of one or the other regions of which you and I have heard preached from the pulpit so often in our childhood days.

But the dispensing doctor is there; it does not take him long to realize the condition. He opens his ever-ready hand-satchel, maybe by the flickering rays of one of those tallow dips that grandma used to make, or probably nothing more than one of those contraptions for which we wild westerners had a most irreverent name, this thing consisting of some kind of a vessel that will hold a little melted tallow or lard and a rag stuck in and lighted. But our hero gets into that satchel quicker than words can tell, takes out a little granule, dissolves it in water, takes it to the one already in the jaws of death, presses the spoon between the cold, blue lips, and lets the vivifying liquid trickle slowly into the mouth and down the throat.

But let us suppose that it already is too late for that. He is armed with his trusty hypodermic syringe and proceeds to fill it with the same solution, picks up the skin—it makes no difference where—and forces the contents into the living tissues. He waits a few minutes, probably not seeing any perceptible results, then repeats the operation, and lo! after a few moments the machinery that had almost stopped forever starts to move. Slowly at first, but the ever-watchful engineer—the dispensing doctor—is at his post, with his fuel at hand. He watches the steam-gauge—higher and higher it goes, until the marking indicates that the engine is steamed up to a safe running capacity. The engineer has acquitted himself with honor, the train is safe and all on board are out of immediate danger. And the engineer never once thinks of receiving a Carnegie medal.

Now let us suppose that the doctor had been of the prescribing class and was compelled to send a runner across the street, probably having to awaken the local druggist, or worse still, had to send one some five or ten miles for the medicine. Where would have been your sinking, dying patient? The echo asks

back, "Where?" Easy to answer, my friend: "Over in the happy hunting-grounds, and no laurels for the nondispensing doctor."

Now, Mr. Wholesale Druggist, do you wish to kick the dispensing doctor some more? If you do, just turn loose your venom, and I'll assure you that it will not be long until someone will be kicked out, and it will not be the doctor either by a long shot.

Now I'm getting down toward the last, as the little boy said, "perty fast." I just wish to add that I and the worthy editors of this journal do not agree on all subjects, and I presume it is best that we should not; yet I should like very much to have them line up with me.

I am a red-hot socialist, and I have been told that you editors are republicans. I once belonged to the same ranks, and something like six years ago, in Portland, Ore., came very near having an encounter with a brother doctor because he was advocating socialism. I was so mad that I did not even learn his name and address. I wish that, if he sees this, he would be kind and forgiving enough—and I know he will if he is still on top of the sod and is still a socialist—to write me, and I will send him, even at this late date, a written apology. I was then down on socialism, as I was down on THE ALKALOIDAL CLINIC when it first made its bow to the fraternity—would not investigate it, threw all literature in the waste basket, like a d—n fool. I feel ashamed of it now and am making an effort to cultivate a feeling of tolerance for everybody and everything, and above all, try to investigate all sides before rendering a final judgment, and as in the instances mentioned, through investigating to condemn I have not only been converted but have become an open advocate.

I am an open advocate of a fair and square deal between any and all people, and, in order to attain this, I am opposed to so many legal restrictions.

I have seen old grandmas with their kind and loving hands, together with their little teas and toddies, accomplish more in the sick chamber than ninety doctors out of a hundred can do with all their scientific medicine, and I hate to see those good old souls hampered, or anyone else for that, by some hidebound class legislation. Hence I say, cast away all laws designed to regulate medicine. The people who are so unfortunate to be our patrons are seeking for help, in time of need, and they judge us, whether justly or not, by our success in giving them that relief, and thereby we get on the top shelf in their opinion or are kicked into the gutter. I am through for this time, probably forever, as I am getting nearly old enough to die.

Z. T. DODSON.

Cleveland, Wash.

[Feel better, doctor, for having let off the steam? That's right. We are willing to act as safety valve as far as our space goes.

Dr. Dodson's dramatic illustration of the dispensing physician's superiority over his nondispensing brother has much truth in it. Even those actively fighting the doctor's dispensing do not claim that physicians should be prevented from carrying medicines "for emergency." The answer is easy. Every illness to which we are called is, in a way, an emergency, and if we are prepared to act at once we can meet it; if not, we are like the plumber who is called to mend a broken pipe, and first comes to locate it, when he goes home for his tools. Only he gets paid for both trips; we don't, often. But, seriously, doctor, if it comes to a show-down, the dispensing physician will win out every time, especially if he has the proper ammunition, and if he can shoot straight. Catch on?

About socialism we may talk another time, though it's getting to be a danger-

ous thing to tackle political or religious problems in a medical paper.

A HEADACHE NUMBER

The Oklahoma Medical News Journal of Oklahoma City is publishing a special Headache number for May. Articles are furnished by the following: Dr. S. Grover Burnett, Neurologist, of Kansas City, Mo.; Dr. W. T. Salmon, Ophthalmologist, of Oklahoma City; Dr. Geo. A. Still of the original Still School (Osteopathic), of Kirksville, Mo.; and Dr. Alva A. Gregory, head of the Palmer-Gregory Chiropractic College of Oklahoma City.

This is an unusual and interesting issue and will be sent to any address upon the receipt of 25 cents.

MASTITIS AND ITS TREATMENT

Your article on Mastitis, in the December (1909) issue impels me to give my experience in the treatment of this affection. Just here I wish to say that not the primipara alone is liable to be attacked with it, but every woman who nurses her baby, at any period during lactation. Another thing to be remembered is, that it may occur when the mother loses her babe and must dry up the milk. To be brief, however, we will not enumerate the causes.

When I first started in practice I employed the stereotyped treatment with hot greasy cloths, belladonna plaster or solution of atropine, camphor, oil of turpentine, phytolacca, either the fluid extract or poultices of the bruised fresh root, which latter we can obtain here all the year round. While never in one of my cases of mastitis pus was formed when I saw it in time, still the applications and drugs were not without fault.

Now, however, I say to the mother when her baby comes, "If your breasts give you any trouble, let me know at once; I can prevent them 'rising.'"

When called upon, I instruct her to bathe the breasts in *hot water*, using, if possible, a vessel in which the breasts can be partly submerged, and then with the hand or a thick cloth thoroughly to bathe the breast, adding more hot water as it cools, always rubbing the breast in straight lines to and from the nipple, explaining, that as the milk ducts run in straight lines toward the nipple, that to rub with a circular motion will force the caked milk out into the tissues and do the very thing we are trying to avoid. After thorough bathing she is instructed to rub the breasts with the preparation I give her, which is simply oil of pennyroyal. If I write a prescription it reads like this:

R̄ Olei hedeomæ rubræ. . ozs. 2

Sig.: Bathe breasts thoroughly as directed, and rub on medicine several times a day.

I instruct the druggist (or when I dispense it, do so myself) to put in sufficient red coloring to impart to the oil a rich color. Sometimes a patient says to me, "Doctor, this smells like oil of pennyroyal."

"Yes," I then reply, "it's very much like it."

One of my patients who had used it before sent a bottle back that was not colored.

Where the case has gone on for some time before I am consulted, or I think pus is about to form, I saturate the system with calcium sulphide, gr. 1-6 to 2 to 4 grains every one or two hours for two days, then every three or four hours.

If you will allow the digression, the pennyroyal is as good for animals as for human beings. In this country where the range is broad, cows stray away or hide in thickets and when the calf comes, it is some days before they are found or come home, and the udder is many times spoiled, i. e., has caked or abscessed. If abscess has not formed, the pennyroyal oil applied, with or without

hot applications, will cure it in practically every case.

Men sometimes apply to me for something to dry up a mare's milk when they wish to wean the colt, or should she lose the colt. It works on them just as well.

This is varied practice, you may say, but the country doctor must be like the apostle of old, "All things unto all men," and we have questions asked us and requests made that would paralyze one who has never been a country doctor.

Now for the sore nipples. Before the baby comes I instruct the woman in these matters, as far as possible. I give the following:

Ext. hamamelis dest. oz. 1

Ext. pinus canad. co. . . . oz. 1

Sig.: Apply to the nipple several times a day.

If the woman is already nursing her baby I tell her to wash the nipples before the baby nurses. I have never found anything that will cure the fissured nipple or harden it like this. I sometimes add equal parts glycerin.

E. H. WINKLER.

DeWitt, Ark.

ACID- FRUIT- PULP POULTICES FOR MASTITIS

It may interest readers of CLINICAL MEDICINE to learn that green-grape poultices, in my experience, will cure mastitis. Green grapes are pounded fine, and the pulp is laid thickly over the entire breast (without warming), and covered over. This will relieve the pain and soreness in from two to twelve hours without any other treatment. The application should be kept moist (preferably with vinegar) or renewed every four to six hours. In the absence of grapes, use lemons. First roll the lemon to break the cells. Then peel and slice thin and apply to the breast, laying on two or three-ply deep, and bind on. One application usually will suffice, if employed early, in all cases of "weed." I

suppose cranberries would also act similarly, but these have never been tried by me.

How do I know? It happened this way. Late one autumn day in the late sixties I rode up to my gate, after a hard day's work, and found a colored man waiting my return. He stated that his wife was nearly dead with pain and swelling of the breast. It was almost dark and so a good eight-mile trip did not sound good to me. I must invent a plausible excuse. A forest tree over-branched my office building and a fine fox-grape vine climbed the tree, loaded down with green fruit. So I said: "See here; fill your hat full of those grapes, take them home, put them in a thin sack and beat them to a mush. Apply them cold to the breast, and in the morning I shall be out to see her. I'm sure it will give your wife relief."

Next morning I went, according to promise, and to my utter surprise found the woman's breast drawn into great corrugations, and the whitest part of her anatomy. Pain had gradually subsided and completely left in less than two hours, and with that the fever, a second application effecting a complete cure. Transferring myself from Mississippi to Texas, where fewer wild fruits grow, I naturally turned my attention to the lemon, and was delighted to find these quite as efficient.

I have been employing this treatment for now about forty years, with but one failure, and that was because of lack of proper application and care; this resulting in an abscess. In all other instances, when the application was made properly, and inside of ten hours, it was successful.

Every physician is familiar with the cause of mastitis, but few know just how easily it can be cured. "Weed of the breast" occurs so often during lactation and gives so much pain that every woman in the world should know this simple, safe remedy; any acid berry

fruit, I believe, would answer. I have always thought that this mode of treatment was found out through pure cussedness.

B. F. ARCHER.

Sweetwater, Tex.

[Many physicians moving only in cultured society or practising among Continental immigrants may never encounter the term "weed," as used by Dr. Archer, and may not even expect to find it in dictionaries. The word is of Scotch origin, but of unknown etymology. Among old-fashioned British and American people "weed" signifies a feverish condition with suppression of milk in a woman in childbed (ephemera, milk-fever, garget), but is also applied to lymphangitis, due to exposure, in a horse's leg (milk-leg in the horse). While by many the term is applied indiscriminately to actual mastitis puerperalis, the better-informed more correctly refer to this condition as "weed in the breast." As to the acid-fruit pulp, if possessed of any special antiphlogistic properties, citric acid in some multiform vehicle might answer equally well in the absence of tart fruits.—Ed.]

GATHERED FROM TEN YEARS' EXPERIENCE

After more than ten years' use of the alkaloidal and other active principle remedies, testing each one and trying to learn its limitations, I send you a few conclusions drawn from my experience. I put them down as they occur to me, or as copied from notes put down in the "Alkaloidal Therapeutics," blank pages for which you have so thoughtfully inserted.

Like most others I began the use of alkaloids with aconitine. In the cases where there is fever and nausea, tincture of aconite is so frequently rejected by the child that it is a pleasure to have a preparation that is effective and well

borne, equalizing the circulation and stimulating natural secretion.

Of course I *always* begin the treatment by clearing the alimentary canal, and some of the credit given to aconitine may be due to this procedure.

My experience in the use of atropine has been very satisfactory. I have used it successfully to arrest hemoptysis in tuberculosis and to control bloody stools in enterocolitis. In the latter cases 1-3000 gr. given, *to effect*, as needed, has acted promptly, warmed up the cold, shriveled extremities and changed a doubtful to a hopeful case. In tenderness and congestion of the prostate it gives prompt relief. In some patients the minutest doses are not tolerated and my observation is that these same patients do not tolerate arsenic any better.

For many years I gave as a tonic, citrate of iron, tincture of nux vomica, and Fowler's solution. In *nearly* all cases this combination acted well, but occasionally the symptoms of intolerance to the Fowler's solution would manifest themselves. Since studying the action of atropine, I have noticed that these same patients are idiosyncratic to both atropine and arsenic, whether owing to the use of the wrong drug for the case, or mistaken diagnosis, I am still trying to find out. Can you tell me? The strychnine arsenate pills produce the same symptoms in these cases.

Some twenty years ago I was prescribing tincture of digitalis for a young lady, the daughter of a family who would not hear of the use of calomel, which at their request I did *not* give, though I thought it indicated. After a few days they accused me of giving it, as the girl was profoundly salivated. Knowing I had *not* given any mercurial, I began to study up the effects of digitalis, and in the United States Dispensatory, 1871, found ptyalism mentioned as one of its effects. On stopping the drug the ptyalism disappeared and the symptom did not recur.

I have since wondered if *digitalin* would have produced the same condition.

Speaking of ptyalism, is it known generally, that salicylate of sodium, given with or at the same time as calomel, will prevent salivation? That such is the fact has been proven many times in my practice.

To clear up muddy, sallow complexions, nothing acts better than a course of calomel and saline laxative followed by salicylates.

Getting back to atropine, I find it very often takes the place of opiates in the relief of abdominal pain, especially the spasmodic and colic-like pains of adults.

Berberine in a case of splenic enlargement gave me good results.

Colchicine, added to laxatives, assists their action, promotes the flow of bile and relieves hepatic congestion. In a case of chronic rheumatism, five drops of wine of colchicum U. S. P., t. i. d., produced a constriction of throat, numbness of tongue and general formication which all disappeared when *colchicine* was substituted for the wine.

In mucous diarrhea *emetine* replaces ipecac, and acts well also as an expectorant and diaphoretic, besides being slightly laxative.

Glonoïn has more than once proved a "life saver" in my practice.

Twice within two years I have called a consultant on account of difficult labor, where rigid os and perineum seemed the whole cause of trouble. To delay the pains until the consultant could come, a half strength H-M-C tablet was given, and in both cases relaxation came on, and delivery was effected without the consultant.

While these random notes do not cover my use of the alkaloids, I thought they might have a point somewhere in them that might help another as they have helped me. I wish I could impress upon every young man entering the profession the great help derived from

keeping a case record. If this were done we would find plenty of "experiences" to send to THE CLINIC, as our AMERICAN JOURNAL OF CLINICAL MEDICINE is still most frequently called by its friends. Among all the journals I take, THE CLINIC is by far the most helpful. I have taken it ever since it was an eight- or sixteen-page pamphlet. May its usefulness ever extend until we no longer have to ask what *strength* a drug is, but merely *what* the drug is in order to know its dosage. Go on with the good work and we'll all help.

I was told a story of an old German physician who was very successful, and at the risk of getting off a "chestnut" will repeat it. His confreres asked him to explain his success. He replied: "All I know is contained in that book," pointing to one on his table.

However he would allow no one to examine it. Finally the old man died, and the book was eagerly opened to learn the secret of his success. It proved to be blank, except the first page on which was written, "*Fus warm, kopf kald, hinter offen.*" (Feet warm, head cold, and keep the bowels open.)

This is the "clean-up, clean-out and keep-clean" practice of the alkaloidist.

A. A. NEFE.

Lookout Mountain, Tenn.

SIMPLIFIED BOOKKEEPING FOR PHYSICIANS

The writer has fashioned a system of keeping the records and accounts of his patients after the following manner, viz.:

He uses a system of index-cards, 5x8 inches, with two divisions, one of which is labeled "Open Accounts," the other "Closed Accounts." One thousand cards are sufficient to start with. They are ruled on both sides and arranged alphabetically. On one side the cards contain the data concerning the patient, in the following order, in vertical sequence:

Name (this being followed by Age, Nativity, Address), History, Symptoms, Physical Examination, Clinical Findings, Diagnosis, Treatment.

The essential points only are noted in writing. This procedure eliminates a vast amount of useless writing which has no bearing upon the case. Thus, if a case under observation strongly suggests tuberculosis, obtain a tuberculous history, if possible. The same for diabetes, nephritis or whatever the case may be. Do not waste time in recording that the brothers, parents, and grandparents died of old age. Simply leave out the negative part and note down relevant facts, as it is the pathologic conditions in which the physician is interested.

On the reverse of the record-card the patient's account is kept. For balancing the account, a single ruling across the card will suffice.

To summarize, we have one side of the card for the patient's condition, the other for his account. One sweep of the pen suffices to close the latter. Several of these cards may of course be fastened together when an account requires it.

The physician, when prescribing, should always retain a copy of the prescription he gives to a patient. This is of advantage to him in more ways than one. First, it is systematic. Second, it is of great value in case of dispute. Third, it is a permanent record for the attending physician, showing just upon what line of treatment the patient has been placed from time to time.

The writer has designed and is using a prescription blank, or rather a prescription book, which is four inches wide by eight inches in length, resembling a check book. The paper is heavy, smooth and tinted, one hundred sheets making up a book. The inside cover acts as a blotter, which lasts as long as the book. The sheets are perforated down the center, allowing a generous-sized stub on

which a copy of the original prescription is written before this is torn off. This duplicate acts as a safeguard and as a double-checking system in dosage in case a prescription is challenged by the apothecary. The stubs are filed away, ready for reference.

J. CLEMENT JENKINS.

Lititz, Pa.

[The above is an excellent adaptation of the card-system, which has come into well-deserved general use in the last ten or fifteen years. A considerable number of such systems designed for physicians' use are on the market, some more, some less complicated. Personally we have found perfectly plain cards, without any printing whatever, not only to be the cheapest, but to answer our purpose better than anything else for the records, case-histories, etc., while for the financial accounts we had cards printed as simple as possible.

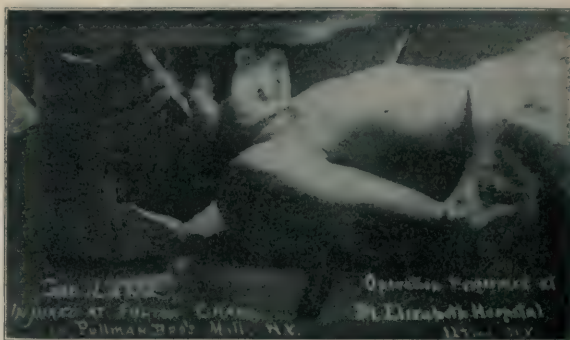
It is a good idea either to have a number of cards printed with diagrams, for entering the results of physical examination, or to obtain rubber stamps with which these diagrams can be printed on the cards as needed. Such stamps can be had for very little money. In any case, the card-system, whether the 3x5 inch cards or larger sizes are used, is by far the simplest, best, most orderly and easiest way of keeping records, notes, memoranda, in short for taking note of all the thousand and one points which constantly come to our attention and have to be kept in mind for at least a time.—ED]

A REMARKABLE SURGICAL CASE

On this page we show the picture of a case reported to us by Dr. George L. Kilborn of Forestport, N. Y., and which occurred several years ago. The doctor

sends us the photograph. The case is that of George Lanz, who was operating an edging machine in a lumber mill. The machine was stopped in some way, and on being released an edging was broken off and driven through Lanz's back. He was thrown to the floor unconscious, but soon regained consciousness, the board protruding from both sides of the body as shown in picture.

The patient was loaded on to a train and taken to Utica, a distance of fifty



A case of chest-perforation.

miles, where he was cared for at St. Elizabeth's hospital. The patient retained consciousness until he was placed on the table for operation. The opening was enlarged by Dr. E. M. Hyland, the operating surgeon, and by the use of a great deal of force he was able to withdraw the wood. The hemorrhage was insignificant. The right lung collapsed, and upon inhalation and exhalation the air passed freely from both openings. Though recovery was delayed by attacks of pleuritis and empyema, the patient finally recovered. This is certainly a remarkable case.

We also show a picture of Dr. Kilborn out in a boat on a beautiful pond or lake on a country place that he owns.

UNIQUE CASE OF MENORRHAGIA SUCCESSFULLY TREATED

The case here reported presents some unique features and may be useful to

others. The patient, a woman, age 48, had been sick for ten years. She was first taken with a severe form of neurasthenia and was confined to bed for a long time. After finally getting up she had menorrhagia so bad that she had to keep in bed for five or six days each month. She could not ride in a wagon or travel anywhere without bringing on menstrual bleeding. This condition became constant, attacks growing more frequent in the past year, so that she was compelled to stay in bed four or five days every second or third week. About two years ago she had an operation for piles and a perineorrhaphy done, but without beneficial results. After this unsuccessful operation she refused curettment, which was suggested. The woman was rather lymphatic in appearance, and she had frontal headaches at times. Her bowels were very regular;



Dr. Kilborn out in his boat

she dared not take laxatives for fear of bringing on a menorrhagic attack. Her general condition was good; uterus not enlarged. Her general feeling of debility I ascribed to her frequent and prolonged stays in bed. There apparently was no local cause for the hemorrhage and hence I ascribed the patient's trouble to deficient coagulability of the blood and relaxed condition of the muscular structures generally.

Working on this theory, the woman was given thyroid extract, 5 grains twice

daily. In addition, a tablet composed of calcium lactate, grs. 8, and calcium chloride, grs. 3, was given three times a day, together with a tonic of hydrastis and strychnine.

As a result, the headaches disappeared and she went one month at first without being confined to bed, getting up earlier than usual. Shortly after this she suffered a relapse from excitement caused by a fire and was kept in bed two weeks. She took the calcium compound for six weeks, then I gave her a compound of Jamaica dogwood, black-haw, hydrastis, and a few drops of fluid extract of ergot, to be taken during the menstrual flow. This seems to work perfectly and she takes it only two days a month or whenever she feels the flow coming on. It has now been ten weeks since she was confined to bed, the longest period in ten years. She feels, naturally, very much better generally, and as it is now the time for the menopause, we confidently look for the present improved condition to continue.

This woman probably has taken barrels of medicine from different physicians without benefit, and her present improved condition is altogether due to the treatment as here described. The calcium compound evidently caused increased coagulation of the blood, while the other medication improved nerve tension and increased the contractility of the uterine muscle.

R. A. BLACK.

Sullivan, Me.

HONORS TO DR. WAUGH

The following item, which appeared in one of the Chicago newspapers, is self-explanatory:

"Leading members of the Italian colony of Chicago gave a banquet Monday night at the Hotel La Salle to Dr. William F. Waugh, dean of the Ben-

nett Medical College, and author of many medical volumes. Dr. Waugh is a well-known resident of Ravenswood and for several years has been associated with Dr. Abbott in the publication of *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*.

"In recognition of Dr. Waugh's work in therapeutics, the *Accademia Fisico-Clinica Italiana* of Palermo, Italy, recently conferred upon him a diploma as honorary member, and awarded him the gold medal of the first class of the academy.

"The banquet was planned by his Chicago Italian friends in celebration of the honor conferred upon Dr. Waugh by the principal medical institution of Italy."

THE NATIONAL ASSOCIATION OF RETAIL DRUGGISTS

We take pleasure in printing below some resolutions passed by the Chicago Association of Retail Druggists, which are self-explanatory. This movement for solidarity among our pharmaceutical friends is one which deserves to succeed. The retail drug trade is being gobbled up too rapidly by combinations of capital of various kinds. The proper remedy is for separate units to "get together" and act unitedly for the common good. If they will do so, and will work with the doctor, whether he be a "self-dispenser" or not, nothing but good can come out of this movement.

The resolutions follow:

Whereas, Various interests are covertly at work to undermine and destroy the influence of the National Association of Retail Druggists, which during the eleven years of its history has served the retail drug interests so faithfully and efficiently; and

Whereas, The policy of these subversive interests is to use individuals and associations that are weak in their loyalty to the national body in the furtherance of their plans, sowing among such the seed of distrust, innuendo and false charges, thereby doing unmeasurable harm to the true interests of pharmacy and the retail drug business; be it therefore, by the Chicago Retail

Druggists' Association in quarterly meeting assembled,

Resolved, That we hereby express our deepest loyalty to the great National Association of Retail Druggists, of which we are proud to belong as the banner local association of retail druggists of this country, and to which we in common with our fellow druggists of America owe so much in the way of organization, protective and educational benefits, and be it further

Resolved, That we caution all members of druggists' associations, and the associations themselves against the deceptive tactics employed by our enemies, secret and avowed, and urge them, both as individuals and as associations to disregard and resent all false reports and malicious charges, and to stand manfully and loyally by our national body and its trusted leaders, knowing always that a true interpretation of facts, and the facts themselves will ever prove, as they always have done, that in the National Association of Retail Druggists as a fearless, independent, conserving and constructive force, we have the truest and best exponent of the retail druggists' commercial and professional needs that the world has ever seen, one that it has taken years of self-sacrificing labors of many heroic men to build and the destruction of which would amount to a calamity, the enormity of which would be too large to estimate; and be it finally

Resolved, That a copy of these resolutions be sent to the *Journal of the American Medical Association* with the request that they be published therein, and to the medical and pharmaceutical press of the country accompanied by a similar request in order that it may be made clear that the 900 retail pharmacists of America's most representative city which constitute the Chicago Retail Druggists' Association, are in the fight to a finish for the upbuilding, advancement and perpetuity of the National Association of Retail Druggists.

DEATH OF ROBERT KOCH

While this number of *CLINICAL MEDICINE* is in press, the morning papers for May 28 announce the death of Robert Koch, to whom we owe, more than to anybody else, whatever success has attended the struggle of the civilized world against tuberculosis, for it was he who discovered and demonstrated in the tubercle bacillus the ultimate cause of the disease. We can, on this occasion, only refer to the sad loss which we have sustained and intend to write more fully upon the importance and value of Koch's contributions to science.



CLINICAL · MEDICINE POST-GRADUATE · SCHOOL *of* THERAPEUTICS

George F. Butler, M. D., Director
Thomas J. Mays, M. D.
Otto Juettner, M. D.

C. E. de M. Sajous, M. D.
William F. Waugh, A. M., M. D.
Alfred S. Burdick, A. B., M. D.

PART III—LESSON NINE

PULMONARY TUBERCULOSIS

THE DRUG TREATMENT OF PULMONARY TUBERCULOSIS

Disease-Labels.—The tendency to consider disease from the standpoint of the disease-label alone has to a very considerable extent vanished from pathology, but it still dominates therapeutics, especially in its nihilistic trend. The conception of disease as a new force in the organism, altering the physiologic balance previously existing and thereby distorting processes, physiologic in themselves, to nosologic ends, has not obtained the dominance in therapeutics that it has in pathology.

The liking of primitive minds for the absolute in lieu of the relative appears in the erroneous assumption of the universal application of self-limitation of disease. The existence of atypic forms of so-called self-limited disease should render futile any dogma based purely on self-limitation. The existence, moreover, of complications of such diseases should bar absolute therapeutic application of this doctrine.

Behind the action of any morbid factor lies the unknown quantity—consti-

tutional vitality. This depends on the constitutional strength which has been received from the ancestor and which has survived the periods of stress. This constitutional vitality is the factor which requires aid in its battle against disease.

Disease creates conditions which weaken and enfeeble vitality more than the disease to which the conditions owe their origin. This is peculiarly the case where the disease, while of local origin, has a tendency to constitutional expressions. Prominent among diseases of this type is tuberculosis.

Error of the Germ-Faddists.—With a growth in the belief in the specific origin of this morbid state has come a tendency to ascribe everything occurring in it to germ infections. This has been the pathologic crime of germ-faddists, but nowhere has it been so strongly manifested as in respect to tuberculosis. The action of the toxin has, from the advent of the germ-doctrine under Pasteur, been too much ignored. Doctrinaire physicians, with the natural predilection for the occult appertaining to primitive mentality, treated germ action with the same reverence that the medi-

cine man did the gods and godlings of disease, and declined to analyze its *modus operandi* from a philistinish fear of the so-called theoretical.

There was a vast clinical material of the constitutional effects of tuberculosis which, whether gathered under the doctrine of inflammation which immediately preceded the germ-doctrine, or under the specific doctrine which preceded this, that was of enormous value in the treatment of tuberculosis. This material had led to the enunciation of every one of the principles now becoming dominant in therapy. However, it had resulted in proper treatment of complications in which our modern therapy of tuberculosis is singularly lacking.

Need of Treating Complications.

—These complications, which seriously sap the general vitality, must be met with treatment specifically directed to them, and herein fails the much-lauded open-air, hyperalimentation treatment. It is a singular illustration of the effect of impressionism in medicine that some of the most serious complications of tuberculosis are completely ignored. This appears, as usual, most markedly in the extra-lung manifestations. The conception of tuberculosis as a diathesis was a truer one than the notion of its localized pulmonary nature, which too emphatically dominates thought today.

The Phthisical Habitus.—The people who are predisposed to phthisis have the heart diminutive; the right ventricle exaggerated. Two great types of degenerate constitutions occur.

One of these classes comes under De Giovanni's category of *the torpid type*. The victim usually is coarse-featured and coarse-skinned, with peculiarly unstable mentality. Slowness of comprehension is combined with power of continuity of thought; at times mental apathy alternates with quickness of perception. Decided exaggeration of the lymphatic system (connected with the utilizing of material elsewhere than at

the point where it has been rendered unfit), with deficient function occurs, resulting in a fitting soil for germs. In other respects the torpid resembles the second type, that is

The erethistic (nervously fussy) type of De Giovanni. This is generally characterized by the presence of a clear complexion, a fine skin and features well cut and often beautiful. The lips are red and the teeth pearly white, though liable to early decay; the eyes are large and full, the pupil being widely dilated and the white of the eye beautifully clear. The eyelashes are long, curved and silky, and the blue veins show distinctly through the clear, thin skin. The bones are light, the hand and feet well formed, the stature often tall, and the whole figure slightly and gracefully built.

The erethists generally remain spare, and have a strong dislike to fatty food. They are vivacious and excitable, and the intellectual faculties are often highly developed. At an early age they show marvelous activity. The regularity with which such precocious tuberculous children die has given rise to proverbs anent exceptionally clever children that they are "too wise to live long." Wanting in stamina, they are incapable of prolonged exertion, either of mind or body, and break down under conditions which would not prove injurious to the healthy. They are continually taking "cold," and are prone throughout life to all acute affections of an inflammatory character.

These children, deficient, as they are, in vitality, are carried off in numbers, during infancy, by convulsions, brain-fever, water on the brain, exhaustion, diarrhea, teething, and other ailments, or they succumb at the second dentition or else at puberty. A small proportion reach maturity. Few live beyond thirty-five or forty years of age. Among these, the females are inclined to frequent and multiple pregnancies.

However brilliant intellectually, these individuals are strongly emotional, impressionable and impulsive. There is a marked absence of mental stability. They are suspiciously capricious. The great secreting and eliminating glands undergo with peculiar frequency the perversions already described. Neuroses and psychoses are decidedly frequent in childhood and youth.

The Degenerative Power of Tuberculosis is not always due to the influence of the germ, or even of the toxin produced by it, but to the state of nerve weakness resultant on the disorder.

The victim of tuberculosis (especially of the lung) is a suspicious, yet hopeful nervous invalid whose functions are irregularly performed, and who, therefore, is likely to leave scions with greater defect, especially as their maternal factor, either through infection or worry, can hardly escape being weakened.

Tuberculosis attacks the bones of the offspring, especially the spine and hip-joint, but the victims of the latter frequently regain health after apparent recovery from the local disease through surgical procedures. If the victim of the hip-joint disorder be of the erethist type, marriage is not unlikely. Despite the deformity produced by spine disorder, popular superstition as to the "good luck" of a hunchback leads to marriage among the working class. Monetary and social considerations effect the same result among the wealthy classes. Here deformity does not prevent marriage, but it predisposes to sterility through birth difficulty.

The Phthisical Cough.—There is, perhaps, remarks L. F. Flick, no symptom in pulmonary tuberculosis more frequently misunderstood and misinterpreted than that of cough. With many people cough and consumption are synonymous. With them cough means consumption, and no cough means no consumption. This view of the matter is misleading, and, unfortunately, is often

shared by the physician. In truth, tuberculosis of the lungs in itself does not produce much cough, and the victim may be entirely free from cough.

The cough which accompanies tuberculosis of the lungs is most frequently caused by a mixed infection of some kind or another. The only time when the tuberculous process itself produces cough is when there is broken-down tissue to come away, and then the cough is profitable. It is indeed surprising how much tuberculous infiltration there may be in the lungs without a reflex disturbance strong enough to produce a cough. This is particularly true of people at rest. This strange phenomenon is due to the fact that an individual has normally, an apparent excess of lung-tissue, or more at least, than is required under ordinary circumstances. Not till he takes exercise or does something which calls into action his reserve lung power is much cough set up. Rest and mental control are ordinarily all that are needed to check excessive cough.

This view, while well based, ignores irritations which, even without gross lesion, require attention because of the exhausting coughs they cause. Cough, therefore, is among the complications which requires attention to a greater degree than they usually receive.

Phthisical Cough of Various Types.—Cough in the tuberculous is of many types and requires medicinal treatment. Some of the more irritating hacking coughs allied to those of hysteria and neurasthenia yield to suggestion as to power of control. Many a phthisical patient can control the hacking if it be suggested that he has the power to do so and that he need not yield.

The hacking cough, however, of tuberculosis is more serious than the same cough found in hysteria and neurasthenia, because it very frequently has an objective origin and serious consequences. It may result, and often does, in the rupture of a degenerated pulmonary blood

vessel. It is possible to combine suggestion and therapy by the use of certain sedatives, such as heroin in small, non-nauseating doses, and preferably apocodeine hydrochloride. The last, however, it should be remembered, has a slight laxative tendency and would be contraindicated in cases where diarrhea from renal disturbance is present.

Formula for Hacking Cough.—

The following combination in form of pill or capsule acts well in many cases: Codeine sulphate, gr. 1-67; emetin, gr. 1-67; aconitine (Abbott), gr. 1-500; hyoscyamine (amorphous), gr. 1-1000. It is an excellent combination. One of these pills may be given every half to two hours, pushed to effect.

The sweet cough syrups and elixirs should, in general, be avoided, as they often are liable to upset the stomach and impair the appetite.

Most of the *diarrhea* in tuberculosis, as Flick has shown, is the result of renal insufficiency and not of intestinal tuberculosis. In these conditions, when cough is present, heroin, codeine, and Dover's powder often act excellently. The latter has frequently a peculiarly beneficial action on the cough and does not necessarily cause diaphoresis.

Coughs attended by marked *bronchorrhea*, with sticky and adhesive secretions require stimulating expectorants, emetin, senega, lobelin, ammonium hydrochloride, which are of benefit in these states, particularly in combination. Here the indication is to avoid a nauseating effect. Very frequently the balsams, inclusive of copaiba and the preparations of codliver oil, answer excellently, in this class of cases, as expectorants. The same is true of yerba santa and allied drugs.

The sticky, adhesive expectoration cases often precipitate *pulmonary hemorrhages*, some of which simply relieve local congestion of the bronchial tubes, and hence have not a specially serious significance.

In certain cases, however, there has been blood-vessel deterioration and they

produce *dangerous hemoptysis*. For this reason they require treatment, as they tend to reduce the vitality of the patient. Hemoptysis, as a rule, does not require active treatment. The patient should be kept quiet in bed. A saline laxative often will check the hemorrhage. Ice to the chest, ergotin, adrenalin, morphine, have all been used with success.

Complicating Diarrhea.—The next serious complication which yields to drug treatment is diarrhea. In many instances, as already pointed out, this is secondary to renal insufficiency, and here uranalysis often will reveal a low degree of urinary acidity, and the presence of indican and allied products from the intestines, hyalin, granular and cylindroid casts, and other evidences of renal strain.

Dietetic treatment is the first indication here and the starches and sugars should be enormously reduced. Tuberculosis patients who ordinarily can take *pure* ice-cream with advantage, under some circumstances have diarrhea therefrom. In such cases it will be found that corn-starch has been used in the preparation of the ice-cream.

Treatment of Renal Insufficiency.

—Here Basham's mixture often exerts a marked influence, and frequently diarrheas of renal origin will yield to it alone. Despite the laxative action of codliver oil, it has the same beneficial influence here that fats have in renal conditions.

The diarrheal states often precipitate rectal fistula. In some of these cases the fistula is the product of tuberculous infection. Frequently, however, the fistula is the result of hemorrhoidal states which have no direct relation to tuberculosis and which, therefore, do not have the illomened significance ordinarily attached to rectal fistula in the tuberculous. In either case, however, any fistula should be promptly treated.

Renal insufficiency often underlies the *pyretic states* which exhausts the tuberculous and are secondary to the dis-

turbances of the heat-regulating apparatus consists of a thermoinhibitory, thermoexcitatory and thermostatic system of nerves. The action of the thermostatic nerves is attended by less general disturbance, while the action of the thermoinhibitory is attended at times by marked cardiac and dyspneic symptoms. The overstimulation of this system of nerves underlies many of the states of depression which so frequently follow the use of coaltar synthetics.

Disturbance of the heat-regulating nerves is apt to be attended, like all febrile disturbances, with marked general nervous irritability, which works in a vicious circle with the pyretic disturbances to which it owes its origin. This *general nervous irritability* underlies the capricious optimism of the tuberculous and predisposes to pyretic disturbances on slight causes from the strain it produces on the kidneys through the nerve waste which it occasions.

Treatment of the Irritable State.

—Very frequently the irritability, and with it the pyrexia, yield to small doses of phenacetin or aconitine, either alone or combined with veratrine, digitalin or strychnine, according to indications.

This, however, does not remove the *underlying kidney strain* from the toxins and from the influence of the general nervous irritability. There are other synthetics, however, which exert a direct action on the kidneys in this particular and to which the pyrexia will yield without cardiac depression. For its pyretic action in this particular, theocin is preferable. It will often relieve the pyrexia and the nervous irritability without cardiac depression. At times, however, while not actually causing nausea, theocin interferes with the appetite to such a degree as to cause apathy for food. The reverse is the case with thiocol. This, while not as marked an antipyretic as theocin, has a markedly stimulating effect on the appetite and a very decided influence on general nervous irritability.

The Influence of Renal Involvement.—It must be remembered that the complexity of the renal plexus involves a great many relationships, and irritation of the kidneys is apt to be widely extended. The renal plexus is made up of fibers from the aortic plexus, from the solar plexus, from the semi-lunar plexus, and from the splanchnics.

It is obvious from this wide distribution that *renal inefficiency from toxins* will cause marked general nervous irritability. The two synthetics named, therefore, will, for these reasons, have a marked influence on pyrexia and on general nervous irritability. They can be efficiently aided by cold sponging, night and morning, down the spine on either side and on the inner and outer aspects of the thighs. They should be given in the morning so as to affect the afternoon rise of temperature so characteristic of tuberculosis. The toxin not only leads to a pyrexia and general nervous irritability, but at times it produces a mental state closely allied to intoxication from alcohol and it also produces a coma which has been more than once mistaken for opium coma. These states, which constitute some of the serious dangers to the walking case of tuberculosis, can be guarded against by the employment of the two synthetics named.

The general nervous irritability, whether affected with pyrexia or not, is a condition which, like all neurasthenic conditions, tends to waste and insufficient elimination, and with the insufficient elimination comes the tendency to the two nervous states described, which can be guarded against with the proper use of theocin and thiocol. The toxin, moreover, very frequently produces the cardiac weakness common to all neurasthenic and autotoxic states. These are usually accompanied by *dyspnea*, which is secondary to the cardiac weakness and not of primary pulmonary origin. Here 1-200-grain doses of strychnine nitrate, given so as to secure cumulative action,

are markedly effectual. The cumulative action is best secured by the patient being given no more than six doses in an hour and then, if no effect is produced (which is rare), no more should be given for two hours. Many a tuberculous patient subject to this toxin-caused cardiac neurasthenia finds it possible, through the strychnine, to take open-air exercise and carry on an ordinary occupation, which, without the strychnine, would be impossible.

Independently of the temporary tonic effect, *strychnine thus wards off states of exhaustion* which deplete constitutional vitality. In cases where there is marked dyspnea, independently of marked pulmonary change, *quebracho* and *aspidospermine* will be found of great value.

The drug-treatment of tuberculosis simply consists of the use of things which prop up the general vitality and which prevent this from being exhausted through the depressing influence of symptoms altogether too much disregarded.

The Distressing Diarrhea of phthical patients occasionally is very trying and hard to stop. The following may be used: Lactic acid, oz. 1 to ozs. 2; syrup of orange, ozs. 6; water, ozs. 6. Directions: To be consumed during twenty-four hours.

Another method of checking the diarrhea is the administration of small enemas containing tannic acid and tincture of opium mixed with cornstarch water, introducing an ounce or two of this mixture every three or four hours until the diarrhea is checked. *Cotoin*, *geranin*, *hydrastin*, *bismuth subgallate* are also very effective as astringents in these conditions.

Treatment of the Dyspnea.—One very striking manifestation of tuberculosis is dyspnea. Of this there are many types, which do not, however, have the destructive pulmonary significance assigned to them. They may be ranged

in three classes: the asthmatic, the emphysematous, and the cyanotic type.

The asthmatic type generally is of the uremic variety, and is due to the renal insufficiency concomitant to tuberculosis. In this type there are two great indications: to increase elimination, and to correct cardiac irritability. The first, increase of elimination by the kidney, may be accomplished through the use of *arbutin* or a strong infusion of birch leaves. For the second condition—irritable rapidity of the heart—we may add *digitalin*, but use it very cautiously. Correction of this latter condition, however, may be attained by the use of strychnine pushed just short of its cumulative effect.

Very frequently strychnine alone, especially the nitrate, not only acts as a respiratory stimulant, but by increasing oxidation and thereby favorably affecting metabolism it produces marked improvement in the general condition. As its cardiac influence improves renal circulation, kidney insufficiency is greatly lessened.

In the emphysematous type the ordinary characteristics of emphysema are found inclusive of the gross lesions. This condition is secondary to tuberculosis, for in true primary emphysema tuberculosis rarely occurs.

In this type the orthopnea which often occurs can be relieved by fumes from the solanaceous plants and of potassium nitrate, besides the other inhalations usually employed here. Amyl nitrite is not contraindicated, since it controls the distressing cardiac rapidity and its consequences.

The third type is often attended by cyanosis and orthopnea. Here *quebracho*, or preferably its alkaloid, *aspidospermine*, may be advantageously employed. That both *quebracho* and *aspidospermine* have an influence in increasing the amount of oxygen in the blood has been repeatedly shown by *Penzoldt* and others. Strychnine arsenate and aspi-

dospermine act very advantageously as synergists. The strychnine has a decidedly favorable influence on the psychic distress produced by air-hunger. Aspidospermine aids this influence both directly and indirectly. Treatment of dyspnea, therefore, has both a physical and psychic effect, which, through the increased hope it gives, encourages the patient to continuous effort and controls the suspicious caprice which is the worst curse of the tuberculous.

Night Sweats.—In regard to the distressing night sweats, a thorough hygienic attention to the skin cannot be sufficiently emphasized. An old domestic remedy, often effectual, is to administer a drink, before retiring, composed of one teaspoonful of brandy and 6 to 12 ounces of lukewarm milk. Two teaspoonfuls of cold sage tea frequently serves the purpose. If such measures fail to act, more direct medicinal agents should be resorted to. For this, one single dose daily, taken at bedtime, of atropine sulphate, 1-67 grain or less, with or without agaricin, 1-6 to 1-2 grain is very effective, the following representing good combinations: (1) Agaricini, grs. 15; pulveris Doveri, dr. 1; atropini sulphatis, gr. 1-3; pulveris althææ, mucilaginis acaciæ, ana quantum satis ad massam e qua formentur pilulæ æquales No. 60. Directions: One or two pills in the evening. (2) Acidi camphorici, grs. 15; dispensantur tales doses No. 10. Directions: Take two or three powders in wafers at bedtime, with short intervals between their administration.

Dermatoses of the Tuberculous.—

Among the sources of distress to the tuberculous are not rarely dermatoses. Tuberculous lesions of the skin would be much more numerous than they are if it were not that the temperature of the skin is not favorable to the growth of the tubercle bacillus, and the uninjured epidermis being practically impermeable for bacteria, affords an excel-

lent protection. Location is a determining factor in lupus.

In patients suffering with tuberculosis there are, as Wallace remarks, lesions of the skin other than those which are strictly tuberculous.

From malnutrition and anemia the skin becomes pale and dry and sometimes grayish; it may become glossy, and frequently it is covered with branny scales; and from interference with the circulation it assumes a cyanotic hue. The sebaceous glands sometimes secrete an excess of sebaceous matter, rendering the skin greasy.

Pityriasis versicolor is a common eruption in patients suffering from tuberculosis. The lesions are at first small, but they eventually develop into patches of considerable size, sometimes covering the whole chest. The color of the patches is yellowish brown, and the skin shows branny desquamation. The patient is rarely itchy, except when he sweats profusely. Although the parasite finds favorable soil in patients with tuberculosis, it cannot be said that this skin disease is diagnostic of tuberculosis.

Intestinal complications in tuberculosis are responsible for erythematous eruptions. The forehead and cheeks, especially below the eyes, frequently are sites of brown pigment spots known as chloasma phthisicorum. Pityriasis tabescentium is a deteriorative process caused by a skin atrophy, and occurs in advanced cases of tuberculosis; the patches are larger than in pityriasis versicolor, and are not so sharply defined. Clubbed fingers and nodular swellings of the toes and other joints are frequently observed. The x-ray observations have shown that in these cases the soft parts only are involved. The nails of patients are brittle and frequently cyanosed. The hair exhibits degenerative changes; it becomes atrophic and loses its gloss, becoming dry and splitting easily. Alopecia sometimes occurs from atrophy of

the follicles. Herpes zoster has frequently been observed. Cutaneous emphysema is rare.

Autointoxication Cause of Skin Lesions.—With the exception of lupus, the dermatoses described are those in which autointoxication plays a predisposing or a determining etiologic part.

In all, improved renal and hepatic action aided by increased oxidation greatly improves the general condition of the patient. In the tuberculous; arsenic, carefully guarded as to its gastric effects, is peculiarly indicated, since it has a decidedly beneficial effect on irritability of the respiratory center.

Arsenic an Important Remedy.—In certain forms of pulmonary phthisis arsenic is equal, if not superior, to any other remedy. It is useful, however, only in those conditions which are characterized by excessive expectoration and a slow degenerative process. The good results of the arsenic treatment in these cases is shown in a conspicuous manner by a marked improvement in the general condition of the patient, there being a lessened pulmonary secretion; a reduction in temperature, improvement of appetite and consequent increase of the body-weight. Arsenic is contraindicated in pulmonary tuberculosis when the cough is harsh and paroxysmal, with but scanty expectoration and a tendency to pulmonary hemorrhage.

A very efficacious compound for proper cases is composed of: strychnine arsenate, gr. 1-67; iodoform, gr. 1-6; calcium lactophosphate, gr. 1-6; nuclein, gtt. 5. This combination goes a long way toward arresting vital decay and destroying the tuberculous virus as well as modifying the bronchial secretion. Four to eight of these pills may be given daily.

The Antiseptics in the Treatment of Phthisis.—One of the first consequences of the germ-doctrine was the idea of a bactericidal therapy. This was an exceedingly crude conception as first

propounded, since it assumed that antiseptics had a specific attraction for bacteria, which could pursue these inimical microbes through the tissues and organs, while leaving the latter unaffected. This absurd hypothesis was one of the many extravagant phases of medicine which followed upon the adoption of the germ-doctrine. For a time pathology was swept into the background.

The pulmonary location of tuberculosis and the fact that certain medicinal substances are excreted through the lungs led to the attempt, entirely logical in its conception, to treat pulmonary lesions with agents which are excreted through the air passages. These agents were principally essential oils and allied substances, prominent among them being creosote. The latter, however, has many objectionable and untoward effects and its excretion by the lungs is unfortunately exceedingly limited.

Fütterer many years ago, employed, both in pulmonary tuberculosis and in pneumonia, oil of birch which is the most concentrated natural source of methyl salicylate. This agent, while not entirely destitute of untoward effects, has undoubtedly a beneficial action on local changes, both from bacteria and from toxins. It also has decided bactericidal action, and is excreted in considerable quantities by the lungs. It may be administered by inunction in the armpits and between the thighs. Beside its bacteriological action it has decided alterative properties, which latter influence the biochemic effects to the toxins.

Nuclein a Valuable Remedy.—Dr. Edgar P. Ward of St. Louis has used with great success triticonucleinate of sodium in physiological salt solution, administered by intravenous injection. The poikilocytes rapidly disappear from the circulation; the hemoglobin in solution is eliminated by the liver as bilirubin and biliverdin; the deformed cells are replaced by new and healthy erythrocytes from the normoblasts more rap-

idly than occurs under any other form of treatment thus far devised.

The author mentioned has been using a solution containing approximately six grains of sodium triticonucleinate to the ounce, standardized to one milligram of organic phosphorus to each cubic centimeter. The physiologic salt solution for dilution is made up of calcium chloride, 0.25; potassium chloride, 0.10; sodium chloride, 9.00; water, 1000—this conforming to the specific gravity of the blood.

Following the intravenous injection of nuclein, the percentage of hemoglobin is markedly increased, as is also the number of red cells, while the specific gravity becomes normal, or nearly so. This is of particular importance in tuberculosis, in which the danger to the patient arises less from the tubercle bacilli directly than from their toxins, and from mixed infection. Therefore, if patients can be subjected to treatment before mixed infection occurs, the blood may be brought up to normal and tissue resistance thus be increased.

GEORGE F. BUTLER.

Chicago, Ill.

DIRECT TREATMENT OF TUBERCULOSIS

The direct treatment of tuberculosis may be defined as that which is aimed at the tubercle bacillus. We may attack the invading microorganism and attempt to destroy it, or we may pursue a Fabian course and endeavor to starve the enemy out by cutting off his supplies and directing a guerilla warfare against him.

The Nucleins presumably act by arousing the vital forces of the body to resist the invaders. Prof. Ward of St. Louis has directed attention to this matter in a paper remarkable not only for the results which he has announced but for the scientific manner in which his studies were conducted. This gives his views an importance by no means to be attributed to the simple announcing of a

cure. Altogether it looks as if Prof. Ward's method were one of the most important before the profession today.

Personally I am somewhat skeptical as to the ordinary physician's success in administering nuclein intravenously, and while the method has its advantages, I am disposed to advise the use of this remedy hypodermically, at least in cases where difficulty is experienced in securing its intravenous administration.

Sulphide Saturation. — Another method of combating the bacillus, which has been frequently suggested and never tried out fully, is saturation with the sulphides. If this proves successful with that most difficult of organisms, the gonococcus, it ought to succeed with the tubercle bacillus. This method has the merits, at any rate, of being harmless and of easy application.

Give a grain of calcium sulphide and a milligram of arsenic sulphide before each meal and on going to bed, increasing the doses to seven daily if necessary. Within forty-eight hours the skin should exhale the odor of sulphureted hydrogen, indicating saturation. This may be kept up without the slightest injury for at least a month. It is difficult to believe that any microorganism can remain alive in the system after such a course of treatment. The one necessary precaution is that the sulphides be of full U. S. P. quality, otherwise the experiment is worthless.

Crotalin is still on the experimental list. A number of reports received confirm the encomiums upon it given by Prof. Mays. Others are not so favorable, while some are decidedly unfavorable. All we feel justified in saying as yet is, that the remedy is one of tremendous power and not to be employed rashly or inconsiderately. My personal impression is that a force of such great power in its influence over the bodily functions ought to be studied and placed at our disposal, the full value of which, however, can only be secured when the

nature, properties and limitations of the action of this new agent are fully comprehended.

In the Adjuvant Treatment I have as yet no reason to modify my views as to the importance of keeping the alimentary canal clear and aseptic.

Fecal retention and toxemia are peculiarly liable to occur in the progress of tuberculosis, and are more disastrous here than in ordinary conditions. The nervous system is especially impressible in these cases and the influence of fecal toxemia is more disastrous than in most other conditions. Take any case of tubercular phthisis, empty the bowels completely and disinfect them with a sufficiency of calcium sulphocarbolate, and the improvement which results from this simple measure will quickly convince the attending physician of its utility.

Looking back over the cases which I have treated during my forty years of medical practice, I can see that each new method which arose during that time was applied with a certain degree of success, undoubted cures resulting; cures which we could scarcely acknowledge to be such in the early days. That was before the discovery of the tubercle bacillus gave us certainty as to diagnosis and confirmed our favorable prognosis, as the bacilli became less and less frequent in the sputa and finally disappeared, the general condition improved correspondingly.

Of my earlier cases there is none on which I look back with more satisfaction than that of one man who, at my suggestion, became a tramp. However, as there are good trusts, possibly, as well as bad ones, there may be useful tramps as well as nuisances. This man learned to apply varnishes, and started forth with a kit of varnishes and brushes, proffering his services at each house at which he stopped. He soon found that he was earning a better living than he had done in the city, while the open-air life restored his health. When I last

heard from him, some five years after he had taken up this life, he looked upon himself as long since completely cured, but wisely continued in his occupation, reasoning that the best way to preserve his health was to continue the mode of life which had restored it.

WILLIAM F. WAUGH.

Chicago, Ill.

PHYSIOTHERAPY IN THE TREATMENT OF TUBERCULOSIS

The Supremacy of Light.—A few statements concerning the biologic importance of light and the effects of light on organic matter, especially the living human body, will serve to illustrate the therapeutic position of light in the treatment of tuberculosis.

Light controls the intake of oxygen and the output of carbonic-acid gas. During the day the amount of oxygen which is assimilated by the human body is between 20 and 30 percent greater than during the night. This means that during the hours of imperfect or no illumination the retention of waste is more or less well marked. Some physiologists consider even the phenomenon of sleep as being a product of carbon-dioxide retention and of coincident poisoning of certain nerve centers.

When the amount of light to which the body-surface is or ought to be exposed is reduced, there is at once a diminution in the manufacture of coloring matter in the blood-cells, i. e. hemoglobin. The hemoglobin of all warm-blooded animals is a biologic derivative whose extraction and decomposition depends on the light of the sun. In this respect it is analogous to chlorophyl or vegetable coloring matter, which likewise is a product of solar radiation. Plants that are reared and raised in dark places are practically colorless. The human body that is deprived of its physiologic amount of light also loses its

color by gradual diminution in the coloring matter of its blood-cells.

Since it is the blood-coloring matter that carries the oxygen, it stands to reason that the body loses its oxygen-carrying power in proportion to the degree of reduction of its hemoglobin. Without hemoglobin to take up and carry oxygen it is useless to attempt oxygenation. The physician who is making his consumptive patient inhale oxygen from an oxygen-tank or ozone from one of those pretentious-looking ozone-generators that are attached to static machines is wasting his own time and that of his patient unless the latter has had a chance to increase his capacity for oxygen absorption. In order to accomplish this, "*let there be light!*"

Finsen has shown us that it is principally the chemical rays of sunlight that have a characteristic affinity for oxygen. Finsen's cure for lupus by applications of actinic rays dwindles into insignificance when we think of the incomparable fitness and efficacy of these rays of light in the treatment of tuberculosis pulmonum.

The true greatness of Finsen's work lies in the establishment of a scientific principle which makes sunlight, or, rather, the actinic rays of sunlight, the eternal and universal specific in the treatment of consumption.

The Sunbath is the great remedy in the management of tuberculosis. Sunlight in cases of tuberculosis is more important than air. It should be applied persistently to the nude body of the consumptive, either directly or in a solarium, or in an arc-light cabinet, which, however, at best, is a poor substitute for the genuine article. I cannot emphasize too strongly that the whole body of the patient must be exposed, without the intervention of even one layer of clothing. Then only is it possible to produce the effects on metabolism, which increased excretory and respiratory skin function is capable of causing.

This is the Finsen idea in its last consequences.

The tendency of to-day is to divorce the tuberculous patient from ill-ventilated dwelling and place him where the air is fresh and oxygen copious. Let us go one step further and divorce the consumptive from clothes of any and all sorts and expose his skin to the light. To put the patient in a pure and rich atmosphere is comparatively of little value if the patient does not possess the power of assimilating oxygen through his lungs. This power is wonderfully increased by acting upon the metabolic machinery of the whole organism through the surface of the body.

Most of us are liable to forget that the skin is equal in physiological importance to any structure or organ in the body. We breathe through the skin, the output of body-heat and waste products of combustion is controlled by the skin; the "tone" of the nervous system, especially the sensory system, is preserved by the impingement of actinic and luminous rays on the nerve supply of the cuticle; the oxygen-carrying power of the blood is enhanced by the pigmentation which takes place in the blood-cells in and beneath the surface.

Let me make this plea on behalf of the *sunbath as the necessary foundation of all rational therapy* in the treatment of consumption. It is the logical beginning of physical therapy in these cases. In connection with this phase of the subject let me add that the notorious frequency of tuberculosis in the negro is attributed to the pigment in the negro's skin, which prevents the entrance of the actinic rays and deprives the body of the negro of the germicidal effect of actinic transillumination.

Iron Therapy and Sunlight.—Those who believe in the blood-making quality of iron and are in the habit of administering the latter will be interested in the statement that exposure of the patient's body to sunlight for hours

after iron has been administered will enhance the effect of the ferruginous substance. By its intense oxidizing action the actinic light of the sun facilitates the change of metallic iron into blood-iron.

The beneficent effects of sunlight can be produced on a small scale by certain electro- and photo-therapeutic applications. For office purposes these applications are admirably available because, while they, of course, are not equal *in degree* to the radiating modalities which come fresh from the workshop of nature, they are the same *in kind* and are capable of doing a great deal of good.

The electric arc has many advocates among physiotherapists. This application should be given in a suitably constructed cabinet, capacious and well ventilated. Four, six, or more arcs should be used. The patient should be nude and comfortably placed on his back or side. His eyes should be protected by blue glasses. The thermic rays can be effectually intercepted by pieces of blue glass properly placed near the arc in the direction of the patient.

Electrotherapeutic Considerations.

—Electrotherapy offers some auxiliary measures of value. I refer to this fact with special emphasis because so many physicians have nothing but a shrug of the shoulders or even a disdainful sneer when electrotherapy is mentioned. I feel sure that with broader knowledge and higher medical education better appreciation of this useful branch of practical therapeutics is bound to come.

The so-called *high-frequency* current applied to the whole body in a properly constructed cylinder (diasolenic cylinder, autocondensation couch, autocondensation cage) effects the oxygen-supply and the hemoglobin production in a very characteristic manner, as shown by the physiologic experiments made by d'Arsonval. The magnetic wave-radiators which have recently been brought to the notice of the profession produce similar effects.

In connection with this subject it is interesting to know that the tubercle bacillus is readily affected by these radiations of high-tension energy. A culture of tubercle bacilli is quickly rendered inert or killed by concentrated chemical rays. A high-frequency current will produce the same result after prolonged suspension of the culture in the magnetic field of an Oudin resonator.

In the use of electrotherapeutic applications much will depend on the physician's technical skill and his power of individualization.

Technic of Tonic Faradization.—

Sir James Grant thus describes the technic of general tonic applications of the faradic current in tuberculosis:

"1. Moisten the skin of the abdomen with warm water and a sponge, before applying the electric current, to the space midway between the hip crest and the last rib, about three inches to the right of the navel—this application to last about ten minutes. Afterward pass the current over the entire abdomen for five minutes, drying the surface carefully after each application.

"2. Moisten each leg, from knee to ankle, and apply the current freely, for five minutes, to each leg, and dry carefully. The object in view in the application of the current to the extremities is to arouse increased nervous activity in the terminals of the sciatic and saphenous nerves, and their various communications in the pelvic and abdominal regions, accessories to the remarkable histogenetic spaces where is produced the very pabulum of life.

"3. These applications will be repeated each day, at bed time, for two weeks or more, and repeated once or twice afterward each week for three or four weeks, should any evidence of weakness continue. No application of the treatment should be made less than two hours after a meal. Before the application of the electric current drop

fifteen or twenty drops of liquid anti-septic soap over the navel and use vigorous massage for ten minutes, over the entire abdomen, with the open hand, previously placed in warm water and then dried carefully. This massage will take place before each application to the abdomen of the current."

Air as a Therapeutic Factor.—The problem of rendering the bacillary cause of the disease inactive or of destroying it entirely suggests itself as an important subject in the treatment of tuberculosis. The bacillus thrives in lungs which are badly nourished. The less fresh air and rich arterial blood find their way into any particular part of the lung, the better are the chances for rapid growth of the germ. The oxygen in the air and in the blood is the natural enemy of the bacillus. A most important therapeutic indication is, therefore, the necessity of pure oxygen-laden air.

In order, however, to become a powerful therapeutic factor the air must have a chance to enter the lungs, particularly those secreted and distant portions where the bacillus has found lodgment, and thrives. The tuberculous patient's respiratory movements are shallow and do not expand the lungs as they should in order to aerate the infected portions. Consequently it is of importance to adopt measures which will deepen the respiratory movements.

To encourage the patient to breathe slowly and deeply, especially out-of-doors, is of course of great value. The effect can be enhanced if additional care is taken to develop the muscular cover of the chest and to render the bony framework more elastic. In suitable cases the effect of procedures of this kind is well-nigh miraculous. These therapeutic methods are classified under the head of mechanotherapy, particularly massage and Swedish movements.

Mechanotherapy and Chest-Gymnastics.—In order to understand the therapeutic value of massage it is proper

to acquire the manual dexterity which alone enables us to form any opinion as to the possibilities of mechanical therapeutic methods. To manipulate the muscles of the chest-wall means to increase the blood supply, to develop them, to render them stronger and more active. This, in and of itself, means more vigorous respirations, especially if the mobility of the thorax proper has been increased. These effects should be aimed at in all cases of lung-consumption, especially during the early stages. The *modus operandi* is subject to variation, owing to peculiarities of individual cases. In a general way the following suggestions will be found applicable to most cases:

Practical Directions.—The patient being placed in the dorsal decubitus the operator begins manipulation over the costal border, gently picking up between his fingers a fold of skin and subcutaneous tissue, lifting it from the body structures beneath and gently kneading it between his fingers. Most patients will be found to be "hide-bound," the soft tissues of the chest-wall being very tense and hard to raise. Eventually, i. e., after repeated sittings, the fold of skin will come up with comparative ease. This manipulation requires all possible patience and gentleness. Lack of delicacy would be worse than worthless. Gradually the manipulation is extended over the whole chest. This form of massage may be followed by gentle stroking in a horizontal direction. Each sitting should last from fifteen to thirty minutes, to be repeated after twenty-four hours.

Within a week or two the muscles of the chest will be less tense and probably a trifle fuller. At this juncture exercise of the thorax might be begun. The operator places his flat hand over the right or left side of the patient's chest, making firm and gradually increasing pressure. The result will be a partial immobilization of a portion of the chest. If the patient

is told to breathe deeply, the effect on the unengaged side of the chest will be more or less intense. The patient will expand the unengaged side of the chest more than he would without immobilization of the other side. The operator may alternately place his hand on one and the other side. He may vary the procedure by placing both hands on the lower portion of the thorax over the last three ribs, thus forcing the patient to expand the upper portions of the chest vigorously. In this way the expansive power of the chest can be increased considerably, rendering inhalation of fresh air a therapeutic factor of prime value.

In applying these mechanical methods to individual cases, much depends upon the judgment and the individualizing faculty of the physician. With proper care and judgment an immeasurable amount of good may be derived from these mechanotherapeutic applications.

Sir James Grant emphasizes the presence of a dilated colon in most cases of tuberculosis, especially the young. The treatment of this condition mechanotherapeutically is of the utmost importance for removing the results of imperfect assimilation.

Inhalation of Oxygen and Ozone.

—To accentuate the usefulness of chest-gymnastics, many physicians have resorted to inhalation of oxygen and ozone. Theoretically speaking, the inhalation of oxygen ought to be the ideal treatment of tuberculosis. It ought to, as it were, supply the missing link in the chain of vital elements which are antagonistic to the bacillus and its development. More especially ought this to be the case when the expanding capacity of the lungs is being increased by breathing exercises or by thoracic gymnastics.

Clinical experience does not confirm this optimism of the theoretical physiologist. The absorption of oxygen is regulated by the physiologic oxygen-carrying capacity of the blood. This, again, is in direct proportion to the relative number

and quality of the red corpuscles. It is plain, therefore, that the forced introduction of oxygen into the air-passages does not necessarily produce an equivalent oxygenation of the blood.

Uncertainty of Oxygen Feeding.

—In order to arrive at distinctly physiological, i. e. curative, effects from this method, oxygen must not only be inhaled but absorbed. The blood of a consumptive is wretchedly poor in oxygen, because the elements which carry it are poor in quality and reduced in number. Hence it is clear that the benefits of oxygen-inhalation are to a large extent illusory in character.

Then, again, there is present in the organism that indefinable element which demands bulk or mass of physiologic fuel rather than concentration or extraction. The experiments that have been made with concentrated food-elements as a pure unmixed substitute for food in bulk or mass, apply analogously to the problem of oxygen feeding. The disappointments that have followed these experiments have demonstrated that the human body and the test-tube of the physiologist are alike only in a provisional sense. The lungs demand bulk, not an extracted element. They crave for air, not for oxygen. Yet oxygen inhalation is not altogether valueless. Aside from being a potent psychic factor it gives the chest a gymnastic training and helps the patient to breathe deeply.

Ozone has many ardent advocates. The popularity of certain high tension electrical devices, especially the static machine, has brought ozone rather prominently before the professional mind—unfortunately so, inasmuch as there is really little to recommend the inhalation of artificially produced ozone. The latter is an irritating gas and not usually well borne by the air-passages of the average consumptive. The odor of the gas, not unlike that of chlorine, is disagreeable to many persons. Unless the gas is largely diluted with air, it is very irritating

and can hardly be borne by the average consumptive. If it is administered in a badly ventilated room, the procedure is of questionable value. Ozone is in no way superior to oxygen as an inhalant, while possessing many disagreeable features which oxygen does not.

After all, it is the mechanical act of deep respiration wherein lies the good of any inhalation method. The mechanical act of deep breathing does the good. The substance inhaled (and there are thousands recommended) is the psychic and persuasive factor. A record of chest expansion should be kept.

In connection with the all-important subject of deep breathing I beg to repeat a few words which I have said on this subject in my textbook of "Physical Therapeutic Methods":

Deep Breathing must be enforced, cost what it may. Niemeyer had an ingenious system of making his consumptive patients breathe deeply. He divided them into classes. Each class was compelled to go out into the open air and walk slowly until they were tired. Then the members of the class were given a chance to lie down in invalid chairs or hammocks and rest. One of the number had to read aloud until another took his place. Occasionally the whole class had to read, sing, whistle or play on wind-instruments. In this way the lungs were constantly active. The children were allowed to romp over the grounds at pleasure. Those that were too weak were allowed to sit in the open air and make soap bubbles with straws. No patient's lungs were allowed to remain idle. It makes no difference how inhalation is effected. The principle thing is to enforce it. There is a sanatorium in the Black Forest in Germany, which—with due apology to the author of "The Divine Comedy"—has a sign over the entrance to the grounds which reads thus: "Walk slowly and breathe deeply, whoever enter here!"—Sudden changes in the temperature of the inhaled air should be avoid-

ed, especially if the bronchial symptoms are well marked.

Light, air and water are, as Flick correctly remarks, the natural enemies of the tubercle bacillus. Having considered light and air in connection with our subject, it behooves us to give some attention to the greatest of the three, water. (Pettenkofer).

Hydrotherapy, in the treatment of tuberculosis, offers a vast field for successful clinical work. Its function is a twofold one: (1.) that of a tonic, constructive, building-up agent, and (2.) that of an effective means to relieve certain concomitant symptoms and meet unexpected emergencies.

What I have previously said in connection with the importance of the skin and its function should be borne in mind with regard to water-treatments. The skin of a tuberculous person should be kept active under any and all circumstances. To accomplish this, rubbing of the skin by means of the hand or a towel, massage (gently stroking and kneading of the back and of the extremities) and vibration (rapid and fine strokes), later on a short cold douche followed immediately by a brisk rubbing with a coarse towel will be found very useful. These comparatively mild methods are employed for the purpose of hardening the patient and enhancing the reactive power of his skin.

After the patient has become habituated to the mild applications, the effect of the latter can be increased by making them stronger and their action on the body more intense. The cold plunge and the cold immersion followed by friction or massage are of good service in many cases. The cold moist-pack (reactive) or the electric-light bath (nonreactive) can be employed as an eliminating agent.

It must be remembered that the clinical picture of the average consumptive case is largely composed of symptoms which are distinctly due to some form of auto-intoxication. The products and derivatives of living and dead bacilli, toxins gener-

ated by broken-down tissues, retained excreta from the alimentary canal, etc., may give rise to a variety of symptomatic manifestations, among which night-sweats, muscular pains, etc., are of common occurrence.

Elimination through the skin should be the keynote of treatment for the relief of these symptoms.

There is no limitation to the employment of water in the treatment of consumption, and it is not necessary to have an elegant modern hydrotherapeutic equipment at one's disposal.

Ease of Using Water Treatments.

—The best argument in favor of the universal applicability and usefulness of water as a therapeutic agent is the fact of the very best results being obtainable by the use of the most primitive kind of equipment, the latter consisting of things which every household affords, e. g. sheets, towels, etc. There is no cost or expense involved, all that is required in the successful application of hydrotherapeutic principles being the knowledge of the subject, a reasonable amount of mechanical skill in the performance of the technical part, and some common sense in handling the patient and meeting the exigencies of individual cases.

This sort of practice may be crude in modern times, when an imposing display of apparatus and scientific claptrap seems to be necessary to give any kind of medical work the proper professional flavor. The simple and crude methods of Priessnitz and of Kneipp contained all the science of the subject, and they produced results. I imagine that close imitation of these primitive forms of practice would be an excellent preparation for any beginner who has the ambition to become a master in the performance of hydrotherapeutic work.

The really great results which can be achieved by water in the treatment of consumption, not to speak of any other diseases, would fully compensate any

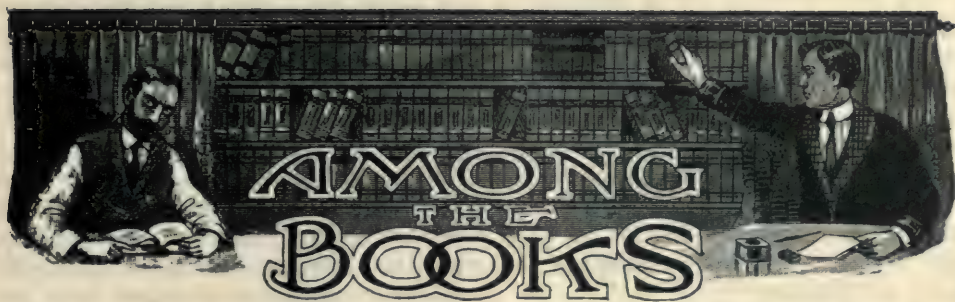
progressive physician for the efforts of becoming a proficient hydrotherapist. Think of how much relief the poor consumptive would derive from greater fitness and resourcefulness of his medical attendant. The reports agree in regard to the value of water treatments in tuberculosis. Freedom from the multitudinous manifestations of autointoxication and marked gain in weight are invariably observed as direct effects of well-directed and correctly applied hydrotherapeutic measures.

OTTO JUETTNER.

Cincinnati, O.

EXAMINATION QUESTIONS

1. Name and describe the local tuberculin tests, giving as many of their designations as are familiar to you. State your experience with them, and your conception of their relative value.
2. Give the principal symptoms to be considered in the early diagnosis of pulmonary tuberculosis.
3. Define "tuberculosis" and "consumption."
4. Give the most important considerations which must enter into the general management of tuberculous patients, as regards their diet, hygiene, work, respiration, rest, outdoor life.
5. What is your experience with creosote or its derivatives in the treatment of tuberculosis?
6. What is your experience with tuberculin or with kindred preparations?
7. What is the proper treatment for cough in pulmonary tuberculosis?
8. What is the best treatment for fever in pulmonary tuberculosis?
9. What is the best treatment for hemoptysis in pulmonary tuberculosis?
10. What is the best treatment for night sweats in pulmonary tuberculosis?
11. How do you treat the anorexia, dyspepsia and other disorders of digestion of tuberculous persons?
12. How do you treat insomnia in consumptives?



SOME IMPORTANT GERMAN PUBLICATIONS ON TUBERCULOSIS

Through the courtesy of A. Stuber's Verlag in Wuerzburg we are enabled to discuss for our readers a number of recent books on tuberculosis that have been published by this firm in Germany. While the modern crusade against the great white plague is world-wide and engages the attention and strenuous efforts of investigators in all civilized countries, we cannot well forget the debt of gratitude we owe to French and German savants, from Bayle and Laennec down to Pasteur and his successors; from Hufeland, Vetter, Virchow to Koch and the theoretical and practical workers of today.

More than ever before medicine is an international, and not a national science, and more than ever before is it absolutely necessary for the practitioner to keep abreast of the times by studying as far as possible the reports, papers and books of medical writers the world over. Since we are as yet far removed from a realization of an international scientific language (Achilles Rose's attractive proposition to employ the modern Greek language for that purpose being hardly more practical than that of Arcadius Avellanus in favor of Latin), we are obliged to study and keep up at least one other language beside our mother tongue, in order to follow intelligently the acquirements of our brothers in other countries. True, we have our review journals, but we must acknowledge that these are hardly developed to such a high efficiency and accuracy as are those in Germany and France. And in any case,

for the student it is of interest to obtain his information at first-hand if at all possible; indeed, in certain contingencies this is practically a matter of necessity. Translations necessarily are of limited value, since they are usually rather late in appearing and do not often reproduce the full information found in the original.

Among the periodicals the study of which in the original we would urge, at least in the case of physicians doing a great deal of tuberculosis work, we may mention the first publications of Koch, in the *Berliner Klinische Wochenschrift* for 1882, and in the *Mitteilungen aus dem Kaiserlichen Gesundheitsamte* for 1884 (vol. 2), which are classics.

Of more recent works, one of the most important ones is the "Lehrbuch der Spezifischen Diagnostik und Therapie der Tuberkulose," by Drs. Bandelier and Roepke (Wuerzburg, 4te Auflage, 1910. Price \$2.00). The first edition of this work appeared in the fall of 1907, and was about one-half the size of the present, fourth, edition. The fact that in a little more than two years four editions of the book have been called for shows not only the immense interest of the questions discussed in it but also its excellence. The authors consider carefully the colossal literature of recent years concerning the specific diagnosis and treatment of tuberculosis, in the light of their own extensive experience.

The latest methods of tuberculin-diagnosis appear to grow in favor and to supplant, to a considerably extent, the tuberculin diagnosis by subcutaneous injection. The great difficulty which has not yet been solved

is, that even with the newer methods we cannot distinguish between active and inactive tuberculosis, and that therefore the outcome of the tests cannot give us any definite information in regard to the necessity for active treatment. In the question of the specific treatment of tuberculosis the authors prefer Koch's old tuberculin and his bacillus emulsion, although they describe all or at least most of the many preparations that have been proposed.

The reviewer regrets to state that the work of American investigators has been treated rather slightly. Vaughan, Pottenger, Von Ruck are just mentioned, and the watery extract of tubercle bacilli is passed over on six lines. We hold that the work done in this country by the authors mentioned, and by many others, is of sufficient importance to deserve consideration.

Wolff-Eisner, "Fruehdiagnose und Tuberkulose-Immunitaet" (2te Auflage, 1909. Price \$3.00.), is another important publication of the most recent times. Dr. Wolff-Eisner has first proposed the conjunctival tuberculin-test, which is sometimes called by his name, sometimes by that of Calmette. In his book he discusses very extensively the theory of immunity, attempting to account for the *modus operandi* of the various specific diagnostic and therapeutic measures. The amount of research involved in the making of this book may be judged from the fact that 557 references from literature have been considered. For the tuberculosis physician the work is of the greatest importance.

Ziegler und Krause's "Roentgenatlas der Lungentuberkulose," 1910 (Price \$10.00.) forms the second supplement to the "*Beitraege zur Klinik der Tuberkulose*," one of the most important tuberculosis publications of the day. It is a beautiful work, containing 61 photographic reproductions of x-ray pictures of lungs, both in health and disease. The x-ray offers a valuable supplement to the other diagnostic methods at our command, and enables us to decide on the amount of destruction which has taken place in diseased lungs. Of course this method of examination does not permit a diagnosis between tuberculosis and no tu-

berculosis, but if we are satisfied of the existence of tuberculous lesions in the lungs, the x-ray examination affords valuable information regarding the extent of the process.

The reviewer would urge those of his readers who have a working knowledge of German to familiarize themselves with the medical literature in that language, not only because much of value can thus be gained, but also because German writers often review the history of problems under consideration to a far greater extent than is done in our country, where we are apt to go right *in medias res*. And yet, as Professor Osler has for years pointed out, the study of the history of medicine is not only interesting but highly important.

AN AMERICAN TEXTBOOK ON "TUBERCULOSIS"

Tuberculosis. A Treatise by American Authors. Edited by Arnold C. Klebs. New York and London: D. Appleton and Co. 1909. Price \$6.00.

Among the many new works on tuberculosis which the last few years have produced the present volume, edited by Dr. Arnold Klebs, has been looked forward to with considerable interest. It is a handy volume of some 850 pages of text, written by some of the most noted tuberculosis-physicians in our country. Among the contributors we miss the names of many men of merit and ability, but we are likewise gratified to find such names as those of Edw. R. Baldwin, Lawrason Brown, Edw. Trudeau, all three of Saranac Lake, Dr. Hektoen, Dr. Ravenel, Dr. Von Pirquet, and others.

The different chapters of this work, after a brief historical introduction by Prof. Osler, treat the etiology and morbid anatomy of tuberculosis, its frequency and distribution, symptomatology and diagnosis, prophylaxis and treatment. These are followed by a section on surgical tuberculosis. The most important contributions to the Washington Tuberculosis Congress have been embodied as addenda. The book can heartily be recommended to the general

practician as useful and of value in the management of tuberculous patients, laying especial stress on the chapter on specific treatment, a form of treatment which is being more and more recognized as proper and teleologic, and which is well presented here by Dr. Lawrason Brown.

When, however, the editor says in his preface that a continuous and systematic discussion of the whole subject of tuberculosis in all phases of interest and value to the practitioner by a single author has become an impossibility, we must take issue with him, and refer in confutation of this claim to the monumental work on tuberculosis by Cornet, which, in its second edition (1907) contains more than twice as much subject-matter as that by Klebs. By this work Cornet has proved that one careful student may singly very well cover the entire subject of tuberculosis in all its important phases and present the discussions on moot questions in readable and usable form.

While the text of Klebs' book is excellent and affords a very good insight into the theory and practice of a disease that is at the present day foremost in all our minds, the reviewer cannot say the same of the subject-index and the bibliography. As for any assistance which the physician may properly expect to derive from the former, and the student and research-worker from the latter, the editor might well have spared himself the slight trouble which he did take, and in so doing might have saved his readers much annoyance and loss of time. We have never seen a subject-index quite so useless. Turning, for instance, to "Tubercle Bacillus," we find references to not less than forty-six pages on which the bacillus is mentioned, but there is nothing to indicate in what connection the subject is treated in each separate place, a mechanical assistance surely to be expected, inasmuch as the index is designed for the convenience of the reader, in order to facilitate ready reference, and not merely to take up space. As for the bibliographic index, the arrangement could not very well be worse if the editor had attempted to give as poor an index as possible. Anybody who has done ever so little research-

work will see the omissions and imperfections of this "Bibliographic Index" (save the mark!) without hunting for them, so that we can spare our time and temper in detailed criticism.

BARDSWELL'S "THE CONSUMPTIVE AFTER SANATORIUM TREATMENT"

The Expectation of Life of the Consumptive after Sanatorium Treatment. By Noel Dean Bardswell, M. D., M. R. C. P. New York: Henry Frowde, Oxford University Press. Octavo, 130 pages. 1910. Price \$1.50.

The study before us forms a very important contribution to the literature on the vexed problem of how far the sanatorium treatment of pulmonary tuberculosis may be legitimately regarded as a cure for the disease. As is well known, most consumptives, on submitting to regular treatment, especially if in a well-conducted sanatorium, show a marked improvement, which persists for a longer or shorter time, and in some cases proves to be lasting. The change of the mode of life, the comparative freedom from worry, the constant supervision of the attending physician, and the careful regulation of the entire life of the patient, with the addition of favorable climatic and other factors, are bound to exert a favorable influence upon a disease which is peculiarly susceptible to outside influences.

The difficult problem always has been to decide after how long a period after discharge from the sanatorium a patient may be pronounced cured provided he has continued without relapse on resuming his ordinary mode of living. Dr. Bardswell, who is favorably known to tuberculosis physicians through several important publications, presents a study of 241 consumptive patients, treated in the two sanatoria under his supervision and discharged during the years of 1900 and 1905. Of all cases considered there were, in 1909:

Well.....	99, or 41 percent
"Alive," but confirmed invalids.....	15 " 6.2 "
Dead.....	101 " 45 "
Died in sanatorium.....	19 " 8 "
Lost sight of.....	7 " 3 "

The number of cases arranged according to the stage and severity of the disease is too small for any definite conclusions, but the author takes his figures to indicate that a permanent recovery may be looked for from sanatorium treatment in from 70 to 80 percent of cases of early consumption, in from 40 to 60 percent of cases of moderately advanced disease, and in some 8 to 10 percent only of those suffering from the disease in its much-advanced stages.

It is not here the place to enter largely into the questions involved. Dr. Bardswell's book must be read for a true appreciation of the information given. That this is important, not only for tuberculosis physicians but also for the general practitioner, as well as from a socioeconomic standpoint, should not need to be pointed out.

BURTON-FANNING'S "OPEN AIR TREATMENT OF PULMONARY TUBERCULOSIS"

The Open-Air Treatment of Pulmonary Tuberculosis. By F. W. Burton-Fanning, M. D., F. R. C. P. Second Edition. New York: Paul B. Hoeber. 1909. Small octavo, 182 pages. Price \$1.50.

This little book, first brought out four years ago, is recognized as a guide in the open-air treatment of consumption, which is, at present, the treatment most in vogue and will probably remain so. While primarily intended for the sanatorium physician, the author takes up more especially in the last chapter, the important question of the open-air treatment at home. This is of the greater value to the practitioner, because only a small percentage of consumptives can, or for that matter, should be sent away from home for treatment. We feel safe in recommending this little manual to our readers for careful study, assured that it will repay both time and money expended manifold.

BARDSWELL AND CHAPMAN'S "DIET IN TUBERCULOSIS"

■ Diet in Tuberculosis, with Cost of Foods and Their Preparation. By Noel Dean

Bardswell, M. D., M. R. C. P., and John Ellis Chapman, M. R. C. S., L. R. C. P. New York: Oxford University Press, American Branch. 1910. Price, \$1.00.

This excellent and useful little dietary, (62 pages, paper cover) was written by the authors of a larger book, entitled "The Principles and Economics of Diets in Tuberculosis," and published in 1908. The authors discuss in a simple and lucid manner the principles that should guide us in the highly important dietetic management of tuberculous patients, considering the question of forced feeding in an eminently common-sense manner. They then take up the question of diet in patients belonging, respectively, to the leisure classes, the working classes, those in sanatoria, and including the dietetic treatment in tuberculosis of the various organs. The book closes with directions for the preparation of certain foods useful in the treatment of anorexia, high fever, dysphagia, etc., and forms in its entirety an exceedingly valuable guide for the general practitioner as well as for the specialist.

THOMPSON'S "CONSUMPTION"

Consumption, Its Prevention and Home Treatment. A Guide for the Use of Patients. By Hyslop Thompson, M. D., Medical Superintendent, Liverpool Sanatorium. New York: Oxford University Press. 1910. Price \$1.00.

This little volume of 72 pages is, as its title implies, intended for the use of the patients, and affords valuable and important information on the causation of tuberculosis and consumption, and on the management of consumptives. The present crusade against consumption is carried on not only in the direction of attempting a cure of the disease but of preventing its spread. The author shows clearly the great importance of environment over that of heredity and teaches how to avoid the communication of the disease. The directions for patients are characterized by common sense and are excellent withal. The book should be read by physicians themselves, and copies may

profitably be given to their patients for their guidance.

SENATOR AND KAMINER'S "MARRIAGE AND DISEASE"

Marriage and Disease. Being an Abridged Edition of "Health and Disease in Relation to Marriage and the Married State." Edited by Prof. H. Senator and Dr. S. Kaminer. Translated from the German by J. Dulberg, M. D. New York: Paul B. Hoeber. 1909. Price \$2.50 net.

"While religions and legislatures have, from very early times, endeavored by laws to regulate the conditions arising from the married state, with a view to increasing the welfare of whole nations or of the entire human family, the question of health in reference to marriage has hitherto attracted but little attention. What effect the physical state of husband and wife has upon each other or upon their union, and *vice versa*, what influence marriage exercises upon the life and health of the married couple or of their descendants, and even on the welfare of entire families or communities, these points have as yet received, outside of medical circles, and especially at the hands of legislative bodies, either no recognition at all or not as much as is commensurate with our present knowledge and views."

This passage from the Introduction to the book before us, written by Professor Senator, will indicate its *raison d'être*. In twenty-seven articles some of the foremost leaders of medical thought in Germany have discussed the many phases of the married state, as it may influence not only husband and wife but also their offspring.

There can be no discussion concerning the timeliness of such a book, and the names of the authors are a sufficient guarantee for the dignified and scientific manner in which the many important questions connected with the problem of marriage and disease are discussed. It would lead us entirely too far to reproduce even abstracts of the opinions and advice advanced. The question of the influence of heredity on the production of disease, which had almost been shelved in the

first period of our modern bacteriologic era, has again been brought into prominence and under discussion. The subject-matter of this book is so important, not only sociologically, but even more from the direct standpoint of the family physician, that we urge our readers to read and study the work carefully.

The translation is well made. The reviewer confesses his regret that the original should have been considerably abridged; but as the translation originally was intended as a popular edition, this was unavoidable. Personally we prefer the original, but for the busy practitioner the salient points are excellently gleaned and presented in readable form.

"REPORT OF THE BUREAU OF ANIMAL INDUSTRY"

The Twenty-Fifth Annual Report of the Bureau of Animal Industry for 1908 (Washington, 1910) contains four important papers on the subject of tuberculosis. Dr. A. D. Melvin discusses the economic aspect of federal inspection of cattle slaughtered for consumption, and points out the enormous economic loss sustained by the owners of condemned animals. He says, justly, that the State should compensate, at least in part, the persons whose cattle are condemned. In spite of these losses, which indirectly affect the prosperity of the nation, the importance of meat inspection and of eliminating the carcasses of tuberculous animals from the market supplies is of the highest, and the present crusade of education in regard to this question is to be continued.

Dr. E. C. Schroeder discusses the relation of the tuberculous cow to public health, and claims that the theory of the acquirement of tuberculosis through the infection by inhalation is not supported by sufficient evidence, but that the ingestion of infected foodstuffs is a far more probable cause.

Dr. John R. Mohler writes on the causation and character of animal tuberculosis and federal measures for its repression, and, together with Dr. Henry J. Washburn, on

the transmission of avian tuberculosis to mammals.

All the papers cited are of more than purely scientific interest, presenting, as they do, not only facts of importance for the physician to know in his daily work, but also facts relating to the economic and sociologic aspect of the tuberculosis problem.

Reprints of the papers mentioned can be had by applying to the Chief of the Bureau of Animal Industry, Washington, D. C., or to the Superintendent of Documents, Washington, D. C., the latter supplying all publications of the United States Government at a nominal charge.

STARR'S "NERVOUS DISEASES"

Nervous Diseases, Organic and Functional. A Textbook of Neurology. By M. Allen Starr, M. D., Ph. D., of the Medical Department of Columbia University. Third Edition, thoroughly revised. Illustrated with 300 engravings and 29 plates in color and monochrome. New York and Philadelphia: Lea & Febiger. 1909. Price \$6.00.

In this book of some 900 pages of large size and closely printed we have an account of the anatomy, physiology, pathology and diseases of the nervous system as understood, taught and treated at the present time by an author who devotes his life to the subject and who has facilities for practising his specialty not surpassed anywhere in the world. The book must be very helpful to the progressive physician, especially so as the author does not neglect the treatment of nervous diseases, either medical or surgical.

"THE INTERNATIONAL MEDICAL ANNUAL"

The International Medical Annual. A Yearbook of Treatment and Practitioner's Index. 1910. New York: E. B. Treat & Co. Price \$3.50.

The twenty-eighth volume of this Annual forms a worthy link in the chain of review volumes which the editors and publishers of this well-known series offer to the medical profession. The Annual occupies a posi-

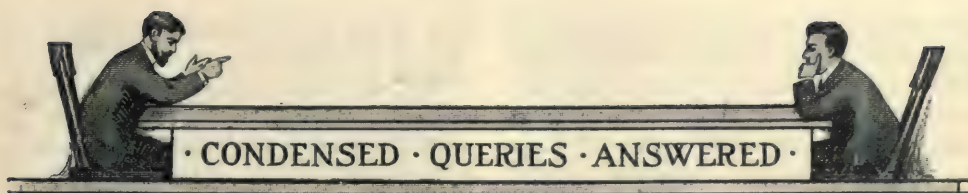
tion that in many respects is unique, in that it offers not a mere accumulation of literary facts, but that the acquirements of the past year are, after the most careful and critical selection, presented in a form which is of immediate value and availability to the practitioner as well as to the research worker.

The reviewer considers one passage in the preface significant. The editor says: "The subject of therapeutics, which languished almost to extinction some years ago, is now becoming an ever-widening field of study. Formerly we discussed the "action" of drugs, now we speak of the "effects" of drugs and the "action" of the organism. The source of energy has been transferred. All the new therapeutic methods have for their object the cultivation of vital energy or its direction against particular toxic agents created from within or admitted from without."

CLINICAL MEDICINE has stood for years for positive therapeutics, and during all this time we have insisted upon the important role played by autointoxication in the causation of pathologic processes. The remedies proposed for the relief of such processes are entirely in accord with those which have always been advocated and preached by us.

We would, however, extend the ideas voiced by the editor and not expect too much from the new gospel of biological treatment of disease. The diseases "where drugs have failed" are not as numerous as one might think, provided the drugs employed have been of sufficient purity and certainty, and have been administered with a sufficient degree of knowledge concerning their actions and indications. We see a decided awakening to positive drug-therapy in the signs of the times, and while, as is natural, the advances of surgery and in vaccine-therapy occupy a considerable space, the drug-treatment of disease has received its due attention.

"The International Medical Annual" forms a handy octavo volume of 762 pages, well indexed, and in part beautifully illustrated. It deserves to find more extended favor with physicians.



PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report the results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERIES

QUERY 5590.—“Oil of Turpentine as an Intrauterine Application.” J. K. S., South Carolina, writes: “If I am not mistaken, I once read in *THE CLINIC* of the great benefit of oil of turpentine in the treatment of an infected uterus, either as a prophylactic or curative agent, or perhaps both.”

Oil of turpentine has been recommended in infections of the endometrium and has proven a fairly safe and effective therapeutic agent. It is absolutely essential that the pure oil alone be used, but not too freely. Many successful gynecologists have advised the swabbing of the uterus with pure oil of turpentine after curetting. At the present time, we think, however, we have at command better remedies. The danger from the oil lies, of course, in the possibility of absorption. Iodized phenol may be applied, after irrigation, on a cotton-wrapped probe, and oil of turpentine used later, determined by the degree of infection. A strip of gauze should always be packed lightly into the uterus after such application and the end left projecting into the vagina, drainage being essential.

However, in many instances it is not necessary to invade the uterine cavity. In such cases thorough vaginal irrigation with a peroxide solution, followed by applications of oil of turpentine and olive oil to the os will suffice. Very hot antiseptic douches, preferably retained, should be ordered, and strips of gauze smeared with vaseline and dusted with a suitable antiseptic powder packed snugly into the fornices. An antiseptic oil containing camphor, thymol

iodide, carbolic acid, menthol, oil of tar, oil of cinnamon, and oil of eucalyptus in an olive and cottonseed oil base has given good results when applied to the uterine lining in endometritis, salpingitis, etc. The efficacy of the copper electrode and galvanic current in such conditions is well understood, of course.

It is important that special pains be taken to secure the rectified oil of turpentine, and it should be used pure. This oil is a valuable and very much neglected agent. It is one of the best remedies for ulcers and infected lesions at the disposal of the physician.

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QUERY 5591.—“Neuritis.” C. R. D., Michigan, is treating a case (of eight years’ standing) of neuritis of the musculospiral nerve which was once resected and sutured. The pain returned, and it prevails over the area of resection, which led to the belief that sclerotic changes have taken place in the resected region. The condition is attended with general neurasthenia. Guaiacol, ethyl chloride, unguentum Bengue, and other local measures have proved of no avail. It is now in a passive, noninflammatory state. Our correspondent asks: “Would a solution of osmic acid injected between the nerve and its sheath, or close to the nerve, accomplish the desideratum without injury to the nerve?”

If you have a wall-plate, try the sinusoidal and galvanic currents. Injections of osmic acid have been recommended highly and almost as vehemently condemned. Bear in mind, Doctor, the necessity, in all these cases,

for intestinal disinfection. An underlying acidemia is usually present. Nuclein hypodermically with laxative salines, and antacids if the urine shows hyperacidity or indican, and the sulphocarbolates to effect, with gelseminine and colchicine, suggest themselves. We should alternate week and week about with the triiodides or calx iodata.

What about the possibility of venereal taint? Applications of epsom-salt solution will unquestionably prove beneficial. Apply compresses as hot as can be tolerated. Chloroform on lint locally has been suggested, and a good preparation of cannabis indica, alternated with atropine and morphine (or hyoscine, morphine and cactin), controls the pain until constitutional treatment removes the cause. The galvanic current is, however, almost essential; cinchonidine salicylate has recently been highly lauded, but we believe that the treatment first outlined by us, together with the use of the galvanic current and epsom-salt solution, will give results.

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 QUERY 5592.—“Cactin *vs.* Strychnine and Digitalin in H-M-C.” E. G. H., Ohio, inquires: “If the insoluble ingredient of H-M-C is the caffeine or cactin, could not this be replaced by a strychnine salt and the alkaloid of digitalis?”

Cactin is sufficiently soluble for all practical purposes and proves unobjectionable. Caffeine is contained only in the “modified” formula, intended particularly for internal use; it also is soluble in hot water; the arsenate has been selected for this reason. All the ingredients, therefore, may be regarded as soluble in hot water.

Digitalin would not prove a satisfactory substitute for cactin. Study the action of the two drugs and you will readily recognize the objectionable features of the latter. Strychnine is particularly undesirable. Relaxation is desired by the surgeon, not rigidity. The combination of morphine, hyoscine and cactin has proven almost an ideal one, and the formula was not devised without an infinite amount of research work, digitalin, sparteine, strophanthin, strychnine,

etc., having being tried out thoroughly and one by one discarded.

The remarkable results secured from the use of hyoscine-morphine-cactin are not secured from the administration of hyoscine and morphine alone; neither will hyoscine, morphine and digitalin, or hyoscine, morphine and strychnine produce similar effects. As a matter of fact, it is undesirable to disturb even the relative proportions between the hyoscine and morphine, an exact “drug balance” seeming to obtain, and the physiologic results secured are different entirely from those following the administration of other combinations.

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 QUERY 5593.—“Marsden’s Paste *vs.* Paquelin’s Cautery.” J. A. B., Indiana, on looking over his old journals, noticed an article on Marsden’s paste in cancer. The writer, however, condemned its use “as brutal,” saying, “more can be done in five minutes without pain with the Paquelin cautery under cocaine.” Our correspondent desires us to tell him what this paste is made of. He says he has two cases of cancer which will not submit to operation.

Marsden’s paste often is efficacious and if applied to small epitheliomas far from “brutal.” The following is the formula, and the technic recommended by the present writer:

Take arsenous acid, 1 dram; powdered acacia, 1 dram; cocaine hydrochloride, 2 grains; mix well, add a small quantity of water and rub to a cream.

Curet the growth thoroughly and apply the paste on a piece of rubber plaster, after oozing has ceased. Leave *in situ* from eighteen to thirty-six hours. It may be necessary to make another application. Occasionally morphine, hypodermically, must be given to control excessive pain. Upon removing the plaster you will find a black eschar surrounded by an inflamed area. Apply hot poultices until this slough comes away, then dress as any other clean wound.

Paquelin’s cautery is an instrument which may be procured from any surgical supply house. The surface of the lesion to be treated

should be cocaineized before the cautery-point is applied.

The improved thermocautery consists essentially of a handle of nonconducting material to which is attached a hollow platinum point; the whole being connected with a double air-bulb and reservoir so that after the point has been heated in the flame of a spirit lamp a stream of benzine vapor can be forced into the hollow point where by the combustion of the vapor caused by its contact with the heated metal a uniform degree of incandescence can be maintained.

A self-blowing cautery-lamp is now on the market, also a very convenient pocket thermocautery, the latter being comparatively low-priced, and also compact and portable. It consists of a benzine-bottle, alcohol-lamp, handle with cut-off, double bulb, and two points; one a regular cautery-knife, the other a perforating needle, about 40 millimeters long and 4 millimeters in thickness at the point.

The description of the Paquelin and other cauteries can be obtained from any instrument house. We suggest writing to Truax, Greene & Co., or to Sharp & Smith.

Doctor, there are cancers and cancers. At the present time it is the opinion of the profession that early operation is essential in practically every instance. That a constitutional dyscrasia exists is unquestioned and it is probable that the man who recognizes and is able to treat correctly this disorder thus bringing about a systemic condition unsuitable to the development of cancer has brought his patient to a point where removal of the growth will result in a cure. It is useless to extirpate a cancerous tumor if the systemic disorder is not corrected. Skin cancers (epithelioma) may be cured by proper systemic and local treatment, but it is worse than useless to attempt to benefit carcinoma by the internal exhibition of drugs.

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QUERY 5594.—“Bromidrosis.” J. S. B., Pennsylvania, asks: “What can you suggest for a case of badly sweating feet, with much odor. The girl will have to lose her place unless we can find a remedy.”

We suggest that you adopt the following treatment in the case of bromidrosis proving so rebellious:

First of all eliminate freely. Blue mass and soda with iridin and podophyllin half-hourly for four to six doses every third night will answer nicely; the next morning give a copious saline.

Have the patient sponge the entire body at least twice a week with a carbolated solution of epsom salts (epsom salt one ounce, water three pints, carbolic acid twenty minims. Soak the feet for five minutes each night in a solution of formalin; commercial (40 percent) solution one dram, water two quarts. Before putting the feet into the solution wash thoroughly with any good detergent soap. Dust into the stockings one of the following powders: (1) boric acid, six drams; acid salicylic, one dram; talcum q. s. to make two ounces; (2) tanniform three drams; boric acid, three drams; talcum three drams. The powder should be dusted freely between the toes.

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QUERY 5595.—“Urinary Analysis.” A. E. W., Manitoba, wishes to know of the best book published for the general practitioner dealing with chemical and microscopic examination of urine, with clinical significance.

Purdy’s “Urinary Analysis” is perhaps as useful a book for the general practitioner as any published. Ogden’s “Clinical Examination of the Urine,” published by the W. B. Saunders Co., is another excellent volume. Either work will serve the purpose fully.

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QUERY 5596.—“Soft Corns.” A. B., Wisconsin, has a friend (and patient) who has been troubled for some months with what he calls a “soft corn” on the sole of his foot at the base of (between) the great toe and the next one. The soreness is a great bother to him as he is compelled to be on his feet almost constantly and nothing he has so far used has had any effect on it. The doctor is “very anxious to help him” and asks for suggestions as to treatment whereby he can expect a permanent cure.

When dealing with so-called "soft corns," bear in mind the possibility of keratoderma, tylosis plantæ. We have here a circumscribed keratoma springing from an apparently normal skin, surrounded by a red areola. Such conditions are usually associated with certain neuroses or vague constitutional disturbances. The possibility of syphilitic keratoma must be considered. A simple callus or corn, whether "hard" or "soft," is essentially a result of external irritation from pressure or friction. Badly fitting shoes are the most common cause. Such callosities occur usually over the bony prominence of the bursa and spring from apparently normal skin.

The soft corn is due to maceration of the thickened horny layers by retained perspiration. The treatment calls, first, for removal of the cause. Properly fitting shoes should be worn and pressure removed by the use of a felt ring over the affected area. Soak the foot in a hot solution of washing soda for fifteen or twenty minutes. Remove the dead macerated-cells by scraping with a curet or dull knife blade, then apply salicylated collodion (30 grains of salicylic acid to the ounce of flexible collodion) and repeat the application daily for a week, then again soak the foot. The greater part of the callosity will come away together with the horny plug, or core.

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 QUERY 5597.—"Anasarca. Prostatitis, Croton Oil." A. A., Washington, asks as follows: "What preparations are useful in anasarca? A physician here advocates the use of potassium bichromate in prostatic troubles. Have you had any reports on the use of this drug in the above cases? Does croton oil when given in certain combination act similarly to castor oil?"

Elaterin and apocynin are the most effective remedies for anasarca, although, of course, this condition is a symptom and it is essential to recognize and correct the underlying pathologic cause. Blue mass and soda with jalapin may be given half-hourly for four to six doses at night two or three times a week, elaterin, 1-32 grain, may be given hourly until watery stools are secured, the

effect being maintained with apocynin, 1-6 to 1-3 grain, four times daily.

Potassium bichromate has never been used by us in prostatic conditions; neither have we heard it recommended in such conditions. The effect of the drug, when taken internally, is said by close observers to be confined to the upper respiratory tract. It has, however, been recommended in inflammatory conditions of the intestinal mucosa, chronic diarrhea, and some forms of dyspepsia. We doubt that this chemical exerts any marked influence upon the prostate gland. We would suggest a trial of chromium sulphate in your prostatic cases. It has given decidedly beneficial results in many instances reported.

Croton oil is a violent cathartic. It is sometimes added in small proportion to castor oil to enhance the effect of the latter, one or two minims of croton oil being added to one ounce of castor oil. Occasionally, when very prompt action is desired, one or two minims of croton oil are given upon the tongue. This, however, is unusual and emphatically an "emergency procedure." Don't make a routine practice of it.

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 QUERY 5598.—"Nausea Caused by Veratrine." E. T. A., Oregon, wants to know why the defervescent formula occasionally nauseates even in reduced dosage.

This formula contains aconitine, digitalin and veratrine. Veratrine not infrequently does cause nausea. The defervescent combination therefore, even in the milder form, may disturb the stomach under certain conditions. Even digitalin may irritate the gastric mucosa. One safeguard is to exhibit a little menthol with the defervescent. If menthol is not at hand, a few drops of essence of peppermint may be given. Menthol in gr. 1-12 tablets should be in every medicine case. They are very convenient and should be used to "settle" the stomach more often than they are. A calomel with aromatics tablet every fifteen minutes for five or six doses proves effective in mild cases. An effervescent saline may follow to good advantage.

R Clinical medicine

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& Medical

Serials

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